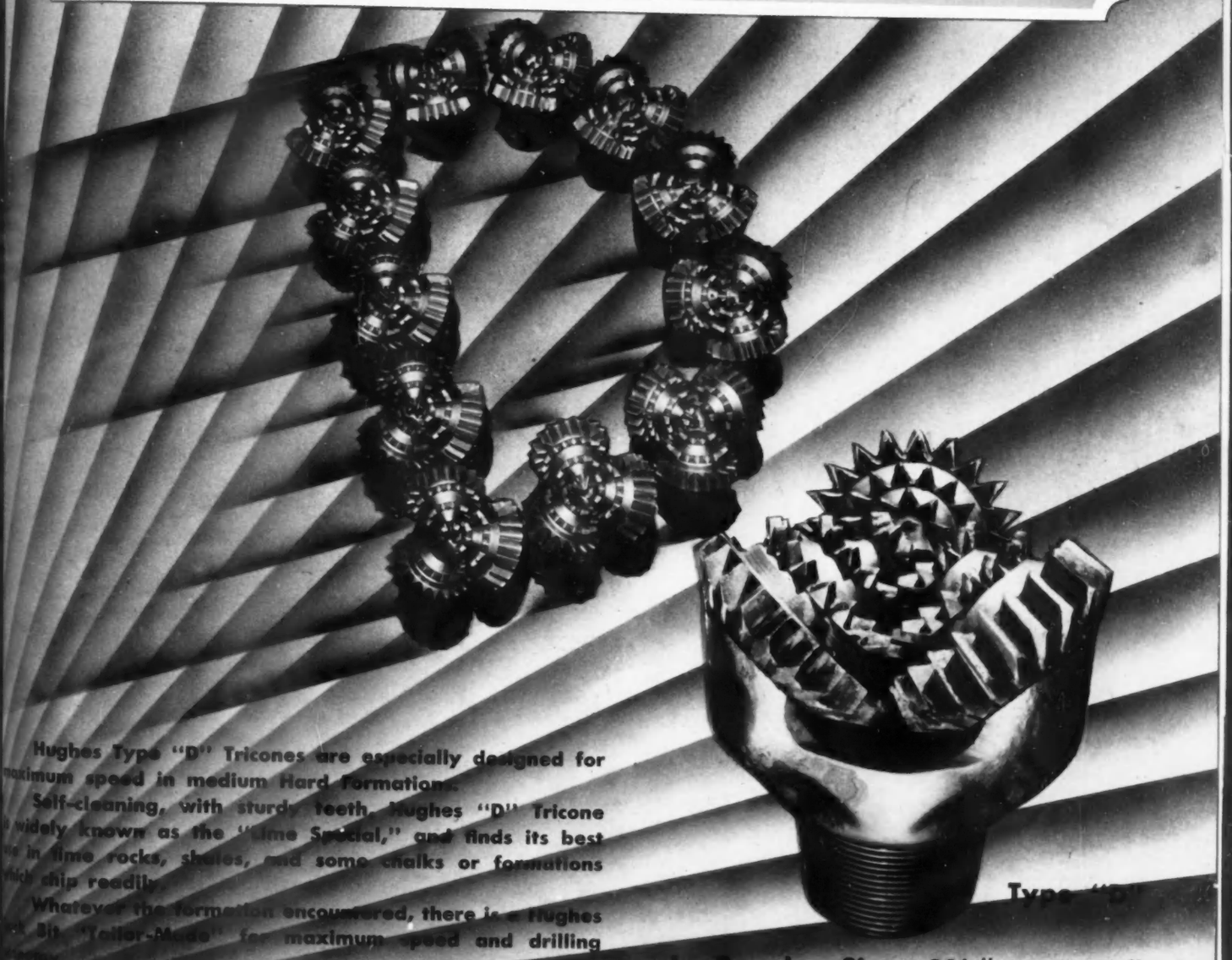
SPEED IN LIME ROCK!



Hughes Type "D" Tricones are especially designed for maximum speed in medium Hard Formations.

Self-cleaning, with sturdy teeth, Hughes "D" Tricone is widely known as the "Lime Special," and finds its best use in lime rocks, shales, and some chalks or formations which chip readily.

Whatever the formation encountered, there is a Hughes Rock Bit "Tailor-Made" for maximum speed and drilling economy.

Type "D"

in Popular Sizes 8¼" to 12¼"

HUGHES TOOL COMPANY, HOUSTON, TEXAS

GIVE ME AMERICAN CABLE
TRU-LAY PREFORMED
Every Time—
1 It resists kinking
2 It spools better
3 It requires no seizing
4 Broken crown wires lie flat and in place
5 It is easier and safer to handle
6 It reduces unproductive shutdowns
7 It lasts longer—gives better service
AMERICAN CABLE
TRU-LAY Preformed
WIRE ROPE

"Whenever my lines must run at high speed—must endure shock loads—must make round trips in short order—then I need American Cable's TRU-LAY Preformed. It has greater fatigue resistance; lasts longer; resists whipping; spools better; is easier to work. If I'm drilling with a cable tool rig—then give me American Cable's 'CRESCENT' non-preformed. That's the line with the reach."

So say thousands of drillers from every field. Nor do they say and believe that just because *we* insist upon it in magazine advertising. They *know* from field experience extending over a long period of years.

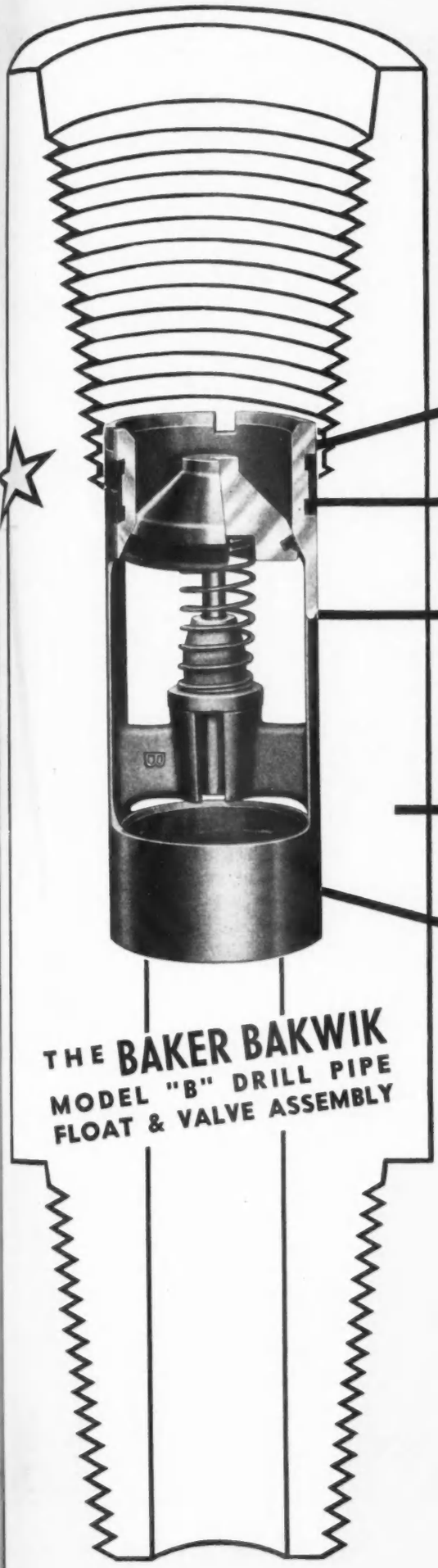
Join the ranks of money and time savers by specifying American Cable's TRU-LAY Preformed for rotary drilling and CRESCENT non-preformed for cable tool drilling.

All American Cable Wire Ropes made of Improved Plow Steel are Identified with the Emerald Strand.

BUY ACCO QUALITY *whether for American Cable Wire Lines—American Welded and Weldless Chains—Ford Chain Blocks—Page Wire Fence—Page Welding Wire—Reading-Pratt & Cady Valves—or any of the other 137 ACCO Quality Products.*

AMERICAN CABLE DIVISION
WILKES-BARRE, PENNSYLVANIA
Branches or Distributors in All Oil Field Centers
Green Signifies Full Speed Ahead for National Preparedness

AMERICAN CHAIN & CABLE COMPANY, Inc.



IT HAS EVERYTHING

That an Experienced Operator Wants in a Drill Pipe Float

THE BAKER BAKWIK
MODEL "B" DRILL PIPE FLOAT & VALVE ASSEMBLY

EASILY INSTALLED VALVE ASSEMBLY
The Valve Assembly is constructed entirely without threads, being merely dropped into place by hand in the Float Joint Body and removed with equal ease.

POSITIVE SEALING
The action of the Back-Pressure Valve is instantaneous and positive with 3-point leak-proof sealing being provided by the use of a Valve Seal and two efficient Side Seals.

VALVE ASSEMBLY QUICKLY AND EASILY SERVICED
When the Valve Seal and two Side Seals become worn in service and need replacement, they can be quickly and easily removed and new ones inserted. This can be done at the rig, and no special tools or wrenches are required. (See Baker Section of Composite Catalog for simple method of servicing Valve Assembly.)

FLOAT JOINT BODY CAN BE RECUT
The normal service life of the Float Body is doubled by designing it to permit a total of two recuts . . . both of which can be made on either the pin or box end; or one recut on the pin end and one on the box end.

STRONG, SIMPLE CONSTRUCTION
The Valve Assembly is constructed of a minimum number of essential parts consisting of materials carefully selected for strength, toughness and the ability to withstand the abrasive action of circulating fluids under pressure.

BAKER BAKWIK DRILL PIPE FLOATS PROVIDE THESE IMPORTANT ADVANTAGES:

Relieve Weight on Derrick and Rig Equipment

Lengthen Life of Wire Lines and Brake Bands

Prevent Plugged Bits and the Annoyance of Wet Strings Resulting Therefrom

Prevent Blowouts Through Drill Pipe

Minimize — Often Prevent Entirely — Any Accident or Damage in Case the Drilling String Should Part

Eliminate Need for a Stop Cock on Drilling String

For Complete Details, See Pages 267-269 of the Baker Section of the 1940 Composite Catalog

BAKER OIL TOOLS, INC.
MAIN OFFICE AND FACTORY
6000 So. Boyle Ave., Los Angeles, Calif., Box 127, Vernon Station
Central Division Office and Factory: P. O. Box 3048, Houston, Texas
Export Sales Office: 19 Rector Street, New York City

A LOOK at the PAST

30 YEARS

A PLEDGE for the FUTURE

30 YEARS

It seems but a day, but it's been thirty pleasant years supplying the oil industry with the best equipment alert manufacturers made possible each year: equipment that kept pace with the increasing depth of wells from two thousand feet thirty years ago to two-mile-depth wells today.

Our pledge to the oil industry for the next thirty years is to continue to give the same personal and thorough service that has been the irrevocable code of the Norvell-Wilder organization for the last thirty years.

The following Norvell-Wilder warehouses are at your command:

Beaumont	**Texas**
Houston	**Texas**
Ft. Worth	**Texas**
Corpus Christi	**Texas**
Monahans	**Texas**
Conroe	**Texas**
Shreveport	**Louisiana**
Lake Charles	**Louisiana**

OFFICES:

Dallas	**Texas**
Tulsa	**Oklahoma**

Day or night - call:

Norvell-Wilder

Supply Company

LOOKING AHEAD

WITH THE EDITOR

A LOT HAS BEEN SAID about the value of wider well spacing and acceptance of the theory is gaining momentum under the impetus of steadily diminishing returns from producing wells in the eight states now under proration. Additional action should be inspired by the experience of Kansas producers which shows a saving of more than $16,000,000 in development costs during the past 11 months. Faced with constantly declining well allowables due to loss of out-of-state market and a high completion rate, Western Kansas operators have resorted to a 20-acre spacing pattern whereever possible, with the result that two out of every three wells completed the past year were drilled on such a basis. This action has materially checked the decline in well allowables and, by eliminating approximately 715 unnecessary wells, has effected the savings estimated above. When compared with 10-acre spacing the current Kansas program represents an economy of 15 cents for each barrel of new reserve developed by completions during the period. Here is something worth the study of every oil man, and the full story will be published in the next issue of your favorite oil publication.

YOU MEN ON THE FIRING LINE have been liberal with your praise of the Recycling Series which is concluded in this issue. Requests are being received from some for additional copies of the five issues containing the discussion but only a limited number of these copies are available. Collectively, these articles provide a complete treatise on modern recycling operations and at the same time point the way toward future developments. Anybody building a recycling plant, or contemplating one for the future, should keep this basic reference handy. Just think, here are 33 pages of descriptions, photographs and flow charts that give you a swivel-chair tour through 11 recycling plants with no secrets held back.

. . . And this reminds us that too little has been said in this column about our new editorial idea of handling important subjects like this with symposium-type discussions that bring together all facts and data required by those who might want to duplicate the operation elsewhere. The first of these symposium discussions appeared in last April issues and dealt with Salt-Water-Injection Systems that are proving successful in the East Texas field. Other subjects, equally important, will be given attention soon but if any of you readers have operating problems of immediate interest let us hear from you and your suggestions will be scheduled first.

FOR THOSE WHO LIKE TO REMINISCE, Tuesday, August 27, offers an opportunity to back-track oil progress to that day in 1859 when Colonel Drake successfully punched a hole 69½ feet into the bank of Oil Creek near Titusville for the first oil well. It is a long road with many detours from early medicinal oil to TNT, yet the researchers say there is no end to the growing list of products that can be made from petroleum. We don't expect to be here when another 80 years have rolled by but it is a bet that an abundance of the greasy substance will be available at prices below the cost of production!

The OIL WEEKLY, Published every Monday. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879.

How thorough lubrication lengthens the service life of wire rope

This is No. 5 in a series of informative articles for Wire Rope users prepared by the Macwhyte Wire Rope Company.

The importance of thorough Wire Rope lubrication in obtaining safe and economical service cannot be overestimated.

Wire Rope is a complicated piece of machinery. A 6 x 19 rope, for instance, is made up of 114 wires plus a core (which may be hemp, or an independent wire rope center).

As the rope bends over sheaves and drums the wires continually move and rub against each other. Each wire becomes a bearing surface that grinds and wears against other wires—unless all are properly lubricated.

Proper lubrication is just as important to wires in your rope as it is to gears in your car.

Two Lubricating Methods

1. Internal Lubrication. A most effective internal lubrication has been pioneered by Macwhyte. During the rope's manufacture each wire is thoroughly covered, spaces between wires completely filled, with a special lubricant. This compound does not dry or flake off in extreme cold. It does not melt or run under summer heat.* This special lubricant protects against internal friction and corrosion.

2. External lubrication, applied on the job, acts to seal in the internal lubrication. It also guards external wires against corrosion and reduces abrasion.

CONCLUSION: If a wire rope user wants the greatest possible service from wire rope, it is wise to buy a rope which is internally lubricated during manufacture (not all ropes are). No external applications applied later can possibly reach the inside wires where it is needed most.

Engineering Service

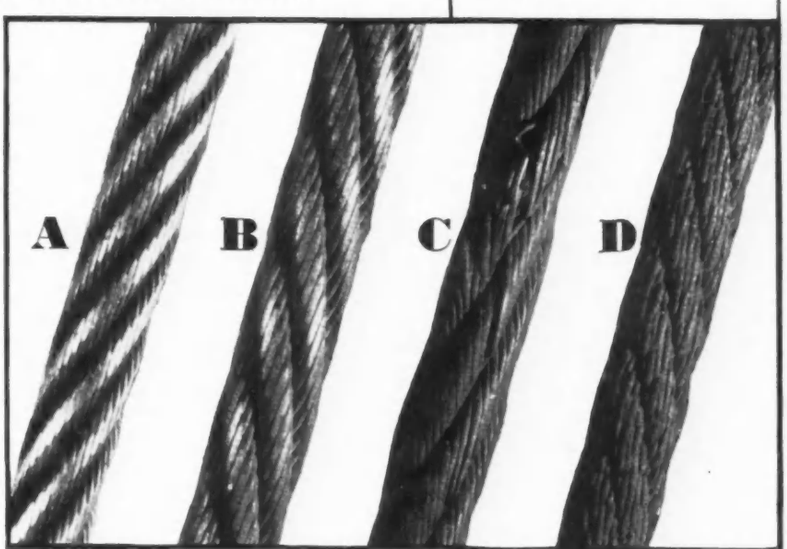
Use Macwhyte Engineering Service—a wire rope or lubrication recommendation may save you many dollars. It's a part of our friendly service to help you get the most from your wire rope dollar.

*For complete information ask for interesting folder, "The WHY IN MACWHYTE Internal Lubrication."

FROM THE FIELD

A This rope contains Macwhyte's Special Internal Lubrication. External lubrication was applied periodically during service. *Result:* Uniform wear, maximum service.

B This rope was internally and externally lubricated with Macwhyte's Special Lubricant during fabrication. It was never externally lubricated in service, however. *Result:* efficient service, but had to be removed prematurely because exposed outer wire became rusty. When removed from job inner wires were still in good condition and well lubricated—indicating that external application of a good lubricant would have prolonged rope life.



C No internal or external lubrication was applied to rope "C." Strands and wires became frozen, which eliminated freedom of wire and strand movement when the rope flexed over sheaves. *Result:* Premature rope failure before wires had received normal wear.

D An idle rope should always be kept lubricated. Rope "D" was removed from service and stored for future use. Not being protected, however, rust and corrosion set in and ruined the rope. *Result:* unnecessary waste and high rope cost that lubrication could have prevented.

MACWHYTE COMPANY
2940 Fourteenth Avenue, Kenosha, Wisconsin
Manufacturers of Rope Wire—Braided Wire Rope Slings—Monel Metal Wire Rope—Stainless Steel Wire Rope—Cable, Tie-Rods, and "Safe-Lock" Terminals for Aircraft; Wire Ropes for all industrial requirements.

MACWHYTE
Whyte Strand
PREformed WIRE ROPE
The Wire Rope with THE Internal Lubrication

NEW YORK · PITTSBURGH · CHICAGO · FT. WORTH · PORTLAND · SEATTLE · SAN FRANCISCO
Distributors throughout the U. S. A.

Laughlin drop forged Safety Clips *grip* wire rope with a real he-man's clench, not the rope-crimping "finger pinch" you get with ordinary U-Bolt Clips.

Recent tests by one of the country's greatest engineering schools prove that Laughlin Safety Clips are over 50% more efficient!

Write for a free booklet which describes these amazing tests and shows how you profit in lower rope and clip costs by using Laughlin Safety Clips. It's free — use coupon. Mail it now.

SAVE ROPE. When ordinary U-Bolt Clips are removed, bent and crimped rope must be cut off — wasting rope. When Laughlin Safety Clips are removed, rope is straight and strong, ready for use again — no waste of rope.

FEWER CLIPS NEEDED. Here's another big saving. You use only three Laughlin Safety Clips to get the same strength you get with four ordinary U-Bolt Clips.

THE THOMAS LAUGHLIN CO.
Portland, Maine

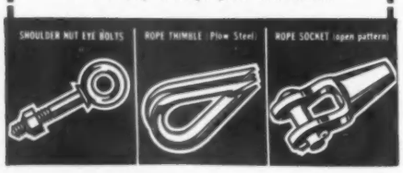
Please send me free Safety Clip booklet O-9

Name.....

Company.....

Address.....

Check here for catalog on items below ☐
Look for Laughlin products in Thomas' Register and buy through your distributor.



Letters to the Editor

Another Comment On Deferred Payouts

DEAR SIR:

. . . I have read both of these articles (Industry Faces Economic Crossroads and Prorated Production at Minimum Profit Level, July 29, 1940), and I particularly agree that the one by Mr. Baker entitled, "Industry Faces Economic Crossroads," is a most thought-provoking article.

We believe that wider well spacing is one of the most important subjects which the industry can consider today. We also agree that wider spacing is necessary if the industry is to continue making profits. Obviously, the solution of the problem is an individual matter calling for the judgment of each operator as to the proper spacing which must be used in developing each field if a profit is to be made from the investment. Necessarily, the particular spacing for any pool must depend upon the reserve per acre, the nature of the structure, the cost of drilling and development, and other factors.

The article on "Prorated Production at Minimum Profit Level" was submitted to our Mr. Finnegan for criticism prior to publication. Mr. Finnegan was in contact with Mr. Baker regarding this article and made several criticisms. Briefly stated, the approach used in this article through average statistics for the industry is highly questionable. The method of analysis is not clear at many points, and the indications are that it is faulty in several respects. Considerable confusion results in the article from lack of clarity in the method of approach in valuing the return. Anyone reading this article, however, cannot help being impressed with the fact that of the tremendous number of wells now being drilled, the pay-out time is being lengthened and we are gradually approaching an impossible situation . . .

JOHN R. SUMAN,
Vice President

Humble Oil & Refining Company, Houston, Texas.

Mr. Suman's comments are appreciated. Pre-publication copy of the article "Prorated Production at Minimum Profit Level" was sent to Mr. Suman's organization, and twenty-four others, seeking to obtain advance criticism of the article to avoid pitfalls of false conclusions or misstatements of facts. We appreciate the criticism that an approach from the standpoint of "average figures" was not 100 percent correct, but in the absence of detailed figures on ALL operations, average figures were chosen because THE OIL WEEKLY Editors felt that a "compensation of errors" would result in a fair article.

THE OIL WEEKLY welcomes detailed data on ALL fields because our publication of the article in question certainly does not terminate the subject in our minds. It is the livest subject facing the oil industry today and Mr. Suman's criticism is genuinely welcomed.

We believe that industry will concur with Mr. Suman in his conclusions "Anyone reading this article however, cannot help being impressed with the fact that of the tremendous number of wells now being drilled, the pay-out time is being lengthened and we are gradually approaching an impossible situation."

Federal Supervision

DEAR SIR:

Enclosed please find a synopsis of my views on Federal Supervision of the oil industry:

1. Federal supervision of the industry for four years with the states reserving police power.

2. Application of marginal well legislation to all states, as now in force in Texas, with strict adherence to "per-well allowable" rather than "per-lease allowable" ruling. Enforcement of this law would curtail the present daily production of the United States approximately 30 percent and would build up, annually, millions of barrels of potential reservoir production now being wasted through excess reservoir energy.

3. Price setting under a federal control board, rather than under a competitive monopoly, giving the same consideration to petroleum that is now extended to other commodities such as sugar, cotton, etc. Statistic show the cost of producing one barrel of petroleum to be $1.55. To have crude petroleum pegged at that price would enable the industry to reduce their daily allowable and to enjoy, to some degree, a sense of security in the stabilization of one of the most essential of all natural resources. The Connally Hot Oil Act proves beyond a doubt the high efficiency of federal supervision, properly applied.

4. Allocation of oil to stills together with regulation of trade zones which would eliminate pipe-line selective buying, and, discriminating freight and pipe line rates.

L. C. HARPER,
President

The Harper Petroleum Corporation, Bryson, Texas.

THE OIL WEEKLY

ENGINEERING « NEWS » STATISTICS

EDITORIAL STAFF
WARREN L. BAKER
Editor
J. KENT RIDLEY
Managing Editor

ASSOCIATE EDITORS
L. J. LOGAN — BRAD MILLS
WM. V. GROSS

DISTRICT EDITORS
B. F. LINZ.....Washington
BEN ALTMAN, FRANK TAYLOR.....Tulsa
H. H. KING.....Fort Worth
EARL S. POST.....San Antonio
R. W. BYRAM.....Austin
WM. H. STRANG, Z. H. MISCHKA, ELTON STERRETT, W. G. NORTH.....Houston

PUBLISHED BY
THE GULF PUBLISHING COMPANY
HOUSTON, TEXAS

R. L. DUDLEY, *President*
A. L. BURNS, *General Manager*
S. W. ROBINSON, *Editorial Director*
TOM W. NELSON, *Advertising Manager*

Staff correspondents at all important points.

Member Audit Bureau of Circulation
Member Associated Business Papers, Inc.

BRANCH OFFICES
NEW YORK.....250 Park Ave.
PITTSBURGH.....Vandergrift Bldg.
CHICAGO.....332 S. Michigan Ave.
LOS ANGELES..W. W. Wilson Bldg., Huntington Park, Calif.
TULSA.....Hunt Bldg.
FORT WORTH.W. T. Waggoner Bldg.
SAN ANTONIO.....Smith Young Tower Bldg.
WASHINGTON.....Albee Bldg.

ADVERTISING STAFF
DICK SWINSKY.....New York
C. A. WARDLEY.....Pittsburgh
H. G. FITZPATRICK.....Chicago
J. F. CARTER, JR.....Tulsa
JAY CURTS, JR.....Los Angeles
CHAS. WYATT.....Houston

CIRCULATION DEPARTMENT
J. T. WAGONER.....Manager

SPECIALIZED OIL JOURNALS
Published by
THE GULF PUBLISHING COMPANY

The Oil Man's Calendar

SEPT. 9–13	American Chemical Society, Detroit.
18–20	National Petroleum Association, Atlantic City, N. J.
OCT. 4	Western Petroleum Refineries Association, Regional Meeting, Wichita.
7–10	American Gas Association, Atlantic City, N. J.
7–11	National Safety Congress and Exposition, Chicago.
16–18	Independent Petroleum Association of America, Dallas.
17–18	American Institute of Mining & Metallurgical Engineers, Petroleum Division, Los Angeles.
25	Western Petroleum Refiners Association, Regional Meeting, Shreveport.
31–Nov. 2	Texas Mid-Continent Oil & Gas Association, Ft. Worth.
NOV. 1	California Natural Gasoline Association, Los Angeles.
11–15	American Petroleum Institute, Chicago.
1941 MAR. 11	Pacific Coast District, American Petroleum Institute, Los Angeles.
APR. 2–4	American Association of Petroleum Geologists, Houston.
24–25	National Petroleum Association, Semi-Annual Meeting, Cleveland.

Contents « August 26, 1940
Volume 98, Number 12

The Week's Panorama..... 13

Feature Section:

Current Statistical Position of the Oil Industry..... 14
BY FRED VAN COVERN

Billings Unit . . . Example of Practical Advantages of Small Area Pressure Maintenance..... 18

Distillate Fields Bring New Production Phase (Part 5) 26
BY BRAD MILLS

A Monument for the Lucas Gusher..... 40

Drilling Contractors' Note Book..... 36

News Section and Index..... 43

Looking Ahead with the Editor..... 4

Letters to the Editor..... 6

Notes for the Equipment Buyer and User..... 81

Squeaks from the Bull Wheel..... 85

Index to Advertisers..... 86

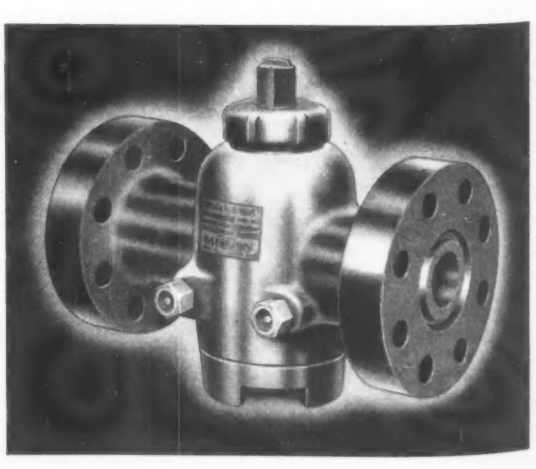
Published every Monday. Single Copies 15 cents (Special Issues 50c). Subscription price: domestic and foreign, $2.00 a year; 2 years $3.00. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879. Subscription restricted to those engaged in the producing and pipe line branches of the oil industry or the manufacturing and distribution of oil field supplies. Advertising rates on application.

Copyrighted 1940, by The Gulf Publishing Company.

"Hey, teacher . . . . my Pop says MISSION PLUG VALVES will last as long as you have."

"My Pop's a driller and he says with grease grooves all around both port openings and 'cause the line pressure is always forcing the grease into the grooves, his common sense tells him Mission valves 'll last for years. He says he likes them 'cause they always hold pressure and turn easy, too."

- *Hundreds are now in use on drilling rigs, flow lines, Christmas trees and in repressuring plants. Many producers report three years of hard service without failure.*
- *Manufactured in 2", 3", 4" sizes — in three grades to meet working pressures of 2000, 3000 and 5000 lbs.*
- *Available at leading oil well supply warehouses. Install Mission valves in your most difficult conditions.*



MISSION MANUFACTURING CO.
HOUSTON, TEXAS NEW YORK EXPORT OFFICE: 30 ROCKEFELLER PLAZA

THE OIL WEEKLY

AUGUST 26, 1940

VOLUME 98 NUMBER 12

The Week's Panorama

MEASURED by the revised index of the Federal Reserve Board, industrial activity now is above the high point of 1929, as well as substantially above a year ago.

• • • The new index of industrial production reflects activity in several young and growing industries that were not represented in the board's old index. The new index is based on production for 1935-1939 as 100 percent, whereas the old index used the 1923-1925 average as 100. The new index shows a higher peak of industrial production in 1937 than in 1929, although the old index failed to go quite as high in 1937 as in 1929.

• • • The national income of the United States for the first half of 1940 has been estimated at 5 percent in excess of that in the corresponding period of 1939.

• • • A survey made for federal government officials indicated that all manufacturing companies in the aggregate would show more profit for 1940 than for 1937 and approximately as much as for 1929. First-half earnings were not quite as good in 1940 as in 1937, but latter-half results should be better, it is expected, as a repetition of the collapse of late 1937 is considered unlikely.

• • • The oil industry should have materially less difficulty during the coming fall and winter than in the similar periods of 1939-1940 in supplying consumers' requirements of heating oil, stocks of that product being in better relationship to increased demand than they were a year ago. Storage is 6,000,000 barrels greater than at this time last year, and the inventory situation will be further improved by the end of September if refiners will continue to take relatively large yields of light fuel oil from the crude they process, while holding down the yield of gasoline, stocks of which are materially excessive. . . . The situation has been improved not only by regulation of refinery yields but also by increased imports of fuel oil and smaller export requirements. Shipments abroad were 4,600,000 barrels smaller in the first 6 months of 1940 than in the corresponding months of 1939.

• • • Crude oil stocks are almost back up to the same level as before the Mid-Continent oil field shutdowns a year ago. The inventory of 263,607,000 barrels on hand August 10 compared with 267,536,000 barrels held a year previously. Changes from a year ago included these withdrawals: Texas outside East and West Texas, 5,000,000 barrels, Oklahoma 4,000,000, Rocky Mountain states 3,000,000, California light oil 1,000,000, North Louisiana 1,000,000, Michigan-Lima 500,000, Pennsylvania 1,000,000. Partially offsetting those withdrawals have been the following additions to storage: Illinois-Indiana 7,000,000 barrels, Kansas 1,500,000, New Mexico 1,500,000, West Texas over 1,500,000, East Texas 500,000.

• • • The average retail price of gasoline in 50 cities rose from 12.53 cents on July 1 to 12.58 cents August 1, the American Petroleum Institute reported.

• • • If United States citizens should be called upon for per-capita military expenditures as great as those now shouldered by the British ($260 annually), the U. S. cost for military purpose would be $34,000,000,000 a year. And if 40 percent of such expenditures were covered by current revenue, as are the British expenditures at present, the taxes for the purpose would bear down to the extent of $14,000,000,000 yearly. . . . Great Britain's 46,000,000 people now are spending at the rate of $12,000,000,000 annually in their total-war effort.

• • • Reported as the largest single order of that nature so far placed was that by Atlantic Coast Line Railroad for 18 Diesel-electric passenger locomotives.

• • • Of the total production of electric energy for public use in June, 37 percent was by water power and 63 percent by fuels. Fuels consumed during the month included 1,014,243 barrels of fuel oil, 15,845,936,000 cubic feet of natural gas, and 3,867,965 short tons of coal.

• • • Technologists say it is practicable and desirable for industrial concerns to spend 2 percent of their gross income for research, as a survey of 188 companies showed such an average expenditure for that purpose.

• • • A wildcat being drilled in Harrison County, West Virginia, is described as the first rotary-drilled test in that state. It will test the Oriskany sand, lower Devonian, expected at about 7300 feet.

• • • Automotive engineers envisage greatly changed automobiles for the future. They foresee rear-engined cars of greater speed and agility, synthetic-rubber tires, synthetic-rubber springs, and spread of air-conditioning from inter-city busses to private vehicles.

Current Statistical Position of the Oil Industry

By FRED VAN COVERN
Director, Department of Statistics, American Petroleum Institute

WE are, of course, all familiar with the conditions which surrounded supply and demand and condition of inventories of gasoline and furnace oils as they existed at the end of last winter. All will recall that on September 30, 1939, gasoline stocks were already high but that furnace oil inventories as of that date proved inadequate in the face of the very severe winter weather which followed. As a result, gasoline inventories on March 31, 1940, established a record-high level and stocks of distillate fuels were greatly depleted. In review of that situation, comparative figures of the inventories of those two products, as the industry entered the past winter and the current summer season, are indicated, by refinery districts, in Table 1.

IN contemplating the outline of this paper, I thought it desirable to depart from its specific title to some extent, at least, and to prepare my remarks in the form of three general classifications as follows:

1. **A review of the situation as it existed at the beginning of the 1940 summer season, or, on March 31;**
2. **The developments so far during the summer and the probable general position as of the end of September; and**
3. **An attempt to look ahead through the last quarter of 1940, and the first quarter of 1941.**

Other important items that were in mind at that time were the trend of the export market and the sustained downward trend of our own domestic business activity. It was, nevertheless, a fact that during the first quarter of this year the demand for the industry's principal product increased domestically about 5½ percent. With the exports of gasoline falling off very nearly half, the total demand for motor fuel was, however, only 1.4 percent greater than during the first quarter of 1939. The combined domestic and export demand for distillate fuels and heavy fuel oils indicated increases of slightly less than 18 percent and 5 percent respectively during this three-months period.

Crude oil inventories and runs to stills were showing sustained trends upward and probably were directly related to the increasing level of crude oil production. Distillate-fuel-oil burners were continuing to be installed at a rapid rate and automobile sales were going ahead very fast. Taken all in all the industry seemed to have a job on its hands in properly balancing the various pluses and minuses in the then-existing situation.

TABLE 1
(Barrels of 42 Gallons)
(All figures are from U. S. Bureau of Mines)

DISTRICT	Finished and Unfinished Gasoline Inventories		Gas Oil and Distillate Fuel Oil Inventories	
	Sept. 30, 1939	March 31, 1940	Sept. 30, 1939	March 31, 1940
East Coast	18,653,000	22,472,000	13,094,000	5,683,000
Louisiana Gulf	1,988,000	3,007,000	852,000	631,000
Texas Gulf	11,439,000	19,383,000	6,455,000	3,306,000
	32,080,000	44,862,000	20,401,000	9,620,000
Ind., Ill., Ky.	11,778,000	19,979,000	4,810,000	2,452,000
Okla., Kansas	6,007,000	8,983,000	1,821,000	881,000
Inland Texas	1,919,000	2,851,000	363,000	128,000
No. La.-Ark.	488,000	947,000	218,000	125,000
	20,192,000	32,760,000	7,212,000	3,586,000
Appalachian	2,715,000	4,502,000	318,000	312,000
Rocky Mountain	1,376,000	2,514,000	227,000	266,000
East of California	56,363,000	84,638,000	28,158,000	13,784,000
California	14,629,000	19,072,000	9,980,000	9,302,000
Total United States	70,992,000	103,710,000	38,138,000	23,086,000

Upturn in May

The rapid decline in business activity of the first quarter tapered off in April, the Federal Reserve Board Index reaching a low of 102 during that month. The trend turned upward, however, in May, increasing each month since then and to such an extent that our latest estimates show a level of 115

TABLE 2

Crude Oil Production—Daily Averages

(Barrels of 42 Gallons)

DISTRICT	WEEKS ENDED July 6, 1940 A.P.I.	July 13, 1940 A.P.I.	July 20, 1940 A.P.I.	July 27, 1940 A.P.I.	Aug. 3, 1940 A.P.I.	Aug. 10, 1940 A.P.I.
Oklahoma	427,900	409,800	417,250	405,800	410,000	381,800
Kansas	182,450	178,200	189,950	186,200	183,150	169,150
Texas	1,138,350	1,143,350	1,168,050	1,354,200	1,169,900	1,176,000
California	625,700	625,100	617,600	606,000	601,600	631,800
Illinois	503,650	485,850	460,500	418,450	406,650	395,050
Arkansas	71,300	72,400	72,450	72,600	72,400	73,050
Louisiana	287,950	281,950	285,950	279,750	280,100	281,400
New Mexico	105,050	105,050	104,350	105,100	105,050	101,600
Michigan	55,900	54,150	54,100	53,600	54,750	54,150
Others	204,150	204,900	210,150	208,700	209,950	211,300
Total U. S.	3,602,400	3,560,750	3,580,350	3,690,400	3,493,550	3,475,300
Total East of Calif.	2,976,700	2,935,650	2,962,750	3,084,400	2,891,950	2,843,500

quarter, continued at a level 26 percent greater than in the previous year, during the second quarter, resulting in a 27 percent increase in motor vehicle sales during the first half of this year, and contributing to an increase of more than 4 percent in the total number of vehicles in use during the first six months.

Coincident with this first-half trend of motor vehicle sales and registrations, domestic demand for motor fuel increased slightly over 7 percent. Exports, reflecting events abroad, continued downward with the exception of June, showing a 47 percent decline when compared with the first half of 1939. As a result, total demand upon American refiners for their principal product increased but 3.0 percent during this six-months period. Crude oil production and runs to stills continued at economically unjustifiably high levels, however, and increased to such an extent that a record daily rate of refinery runs of almost 3,700,000 barrels per day was established during the week ended June 22, and an average of just over 3,600,000 barrels daily for the month.

As a result, motor-fuel inventories were drawn on only to the extent of 10,000,000 barrels during the second quarter, leaving a June 30 total of finished and unfinished gasoline at 93,600,000 barrels in comparison with 103,700,000 barrels on March 31.

Crude-oil production which saw a high of 3,800,000 barrels daily in March, and only slightly less in April, turned down to some extent when production was approximately 3,600,000 barrels daily. The latest figures available as this was written were those of August 10, during which week crude-oil production averaged 3,475,000 barrels per day. This trend is indicated in Table 2.

Still Runs Decline

The daily average rate of crude oil run to stills has also shown an almost continuous series of declines recently. During the seven-weeks period ended August 10 in every week with the exception of one, that of July 27 in which there was a relatively small increase, runs to stills have registered declines indicating a falling off in the amount charged to refineries from a high level of 3,690,000 barrels per day as of June 22 to 3,435,000 barrels daily during the week ended August 10, a decline in the daily rate of runs of 255,000 barrels during this period. This undoubtedly is significant of the understanding and attitude of refiners generally.

Table 3 shows the details of these figures, by districts and important groupings, during the period referred to.

While crude-oil production and runs to stills worked up in almost continuous trends, remaining high through the entire first half of the year, crude oil inventories were also increasing. True, the recent rate of increase in crude stocks has slowed up some in comparison with the earlier months, probably being affected by the recent trend of production, but these inventories are, nevertheless, still going up as Table 4 will show.

The trend of gasoline inventories which accelerated downward during June, influenced to some extent, no doubt, by forward buying in anticipation of the then proposed increase in the federal gasoline tax, which later became an actuality, slowed up some in July as a direct reflection.

The latest figures available are those of August 10. They show a total inventory of finished and un-

TABLE 3

Crude Oil Runs to Stills—Daily Averages

(Barrels of 42 Gallons)

DISTRICT	WEEKS ENDED June 22, 1940 A.P.I.	July 6, 1940 A.P.I.	July 20, 1940 A.P.I.	Aug. 3, 1940 A.P.I.	Aug. 10, 1940 A.P.I.
East Coast	603,000	529,000	547,000	549,000	558,000
Louisiana Gulf	120,000	139,000	116,000	121,000	126,000
Texas Gulf	932,000	934,000	917,000	915,000	846,000
	1,655,000	1,602,000	1,580,000	1,585,000	1,530,000
Ind., Ill., Ky.	654,000	673,000	655,000	616,000	592,000
Okla., Kans.	331,000	315,000	321,000	309,000	314,000
Inland Texas	173,000	161,000	171,000	161,000	177,000
No. La. and Ark.	66,000	72,000	67,000	70,000	77,000
	1,224,000	1,221,000	1,214,000	1,156,000	1,160,000
Appalachian	128,000	121,000	131,000	127,000	125,000
Rocky Mountain	79,000	79,000	77,000	88,000	104,000
East of California	3,086,000	3,023,000	3,002,000	2,956,000	2,919,000
California	614,000	580,000	598,000	554,000	516,000

California	14,629,000	19,072,000	9,980,000	9,302,000
Total United States	70,992,000	133,710,000	38,138,000	23,086,000

increasing each month since then and to such an extent that our latest estimates show a level of 115

NOTES FOR THE Equipment Buyer and User

Monsanto Chemical Company to Build New Plant Near Detroit

Monsanto Chemical Company, St. Louis, Missouri, has begun work on plans for a manufacturing plant in the Detroit area for the production of peacetime chemicals, Edgar M. Queeny, president, announced last week. A tract of 138 acres has been purchased 15 miles southwest of Detroit and a mile southwest of the business district of Trenton, fronting on the Detroit River.

The plant will be the company's eighteenth, and the fourth in its phosphate division. Completion is scheduled for mid-1941.

J. B. Durkee Joins L. K. Pump Valve as Sales Representative

J. B. Durkee has been named sales representative in the Gulf Coast and Mid-Continent territories for L. K. Pump Valve Company, Houston. After working in Texas oil fields as roughneck and assistant superintendent, Durkee served 8 years as sales representative for A. M. Byers Company, moving to Houston in 1934 to become district manager for the company. He recently was sales representative for McEvoy Company.

J. B. DURKEE

Distribution Transformers

Allis-Chalmers Manufacturing Company, Milwaukee, has issued Bulletin B-6096 describing a new line of distribution transformers in ratings of 1½- to 25-kva and standard voltage classes from 2400 to 7620 volts. Its 16 pages describe principal design features and illustrate manufacture of the transformers.

L. A. BABB

Vice president and director of sales for Bridgeport Machine Company, has transferred from the Wichita to the Tulsa office of the company.

Minimum Wear on Line and Sheave

with . . .

McKissick *Safety* Floor Blocks

This is made possible through use of the Universal Adapter—so designed that plenty of side sway is permitted, without any undue wear on the line or sheave. Ball-bearing swivel assembly permits block to freely swivel under heaviest loads.

Our Safety Floor Blocks are available with base plate or latch-type becket. The guards are so constructed that they do not need to be detached for threading the line, which assures permanent safety during the life of the block.

Available in four sizes with single bearing, and two additional sizes with double bearings—sheave diameters from 12" to 24".

At Supply Stores

McKISSICK PRODUCTS CORPORATION
TULSA, OKLAHOMA

Squeaks from the Bull Wheel

Paper Losses

Will you let me have a dime, mister?

I haven't got any change on me, but I'll give it to you when I come back this way.

Well, all right; but you'd be surprised at the money I lose giving credit this way.

And Follow Through

The sweet young thing asked him if he could tell her how to play golf.

"Sure, it's easy," he told her, "all you do is hit the pill then walk."

"How interesting," she replied, "just like some of the automobile rides I have been on."

Under the Collar

"Little boy, do your dogs have licenses on them?"

"Yes Sir! They're just covered with them."

The Saving Side

"Does your wife economize?"

"Oh, yes; we have to do without practically everything I need."

A Pushover

Policeman: "How did you knock him down?"

Motorist: "I didn't! I pulled up to let him go across—and he fainted."

Brother Act

"Lady, if you'll give us sixpence me little brother'll imitate a hen."

"You mean he can cackle like a hen?" asked the lady.

"No," replied the boy in disgust. "He wouldn't do a cheap imitation like that. He'll eat a worm."

Also Full

"Johnny, what is a cannibal?"

"I don't know."

"Well, if you ate your father and mother what would you be?"

"I'd be an orphan."

Perhaps at the Beach

"Oh, doctor, will the scar show?"

"That, young lady, is entirely up to you."

Barking Dogs

A latecomer to the circus was fussily pushing his way to a seat.

"Did I tread on you, old man?" he remarked.

"It must have been you. All the elephants are in the ring."

Free Wheeling Brain Power

"Next to a beautiful girl, what do you think is the most interesting thing in the world."

"When I'm next to a beautiful girl, I'm not interested in thinking."

But Not to Operate

First Interne: "Why do you call that new nurse 'Appendix'?"

Second Interne: "Because all the doctors want to take her out."

Lost

A hotel guest was awakened in the middle of the night by a commotion at his door. He opened it and found a drunk.

"Very sorry," said the drunk, "thought this was my room."

The sleeper retired only to be awakened again five minutes later by the same man.

"I most humbly apologize," hiccupped the drunk, "I'm still tryin' to get to my room."

Again the sleeper went to bed, again he was disturbed and again it was the same souse. But this time the inebriated one's good humor and politeness vanished.

"Look here," he said, "have you got every confounded room in the house?"

No Expense

"Why, Bridget, the electric heater in the hall has been on all day long!"

"Don't worry about that, ma'am. I borrowed it from the people next door."

Drafted

The negro preacher's term had expired and he was anxious to stay on.

"Brethen," he said, "the time has come fo' youall to elect a pastah fo' anothah yeah. All dose favorin' me will please say 'Aye.'"

He waited a moment and then: "Silence gives consent, I'se yo' pastah fo' anothah yeah."

Daylight Raving Time

Does your watch keep good time?

Why, you notice the days are getting longer, don't you?

Yes.

Well, that's just the sun trying to get back to schedule with my watch.

Where There's No Smoke

The landlady entered a boarder's room on the morning of his departure. "I see, sir," she said, "there's a hole burnt in that easy chair. Of course, I shall expect you to pay for it."

"Not likely! You can't blame me for it. I don't smoke!"

"Of all the nerve! I've had this house for over two years, and you're the first visitor who has refused to pay for that hole!"

Also in the West

"My, what a beautiful sunset this is!"

"Yeah, not bad for a small place like this, is it?"

Cash and Carry

"Henry, I thought you told me that your bank loaned money on notes?"

"So it does, dear. Why?"

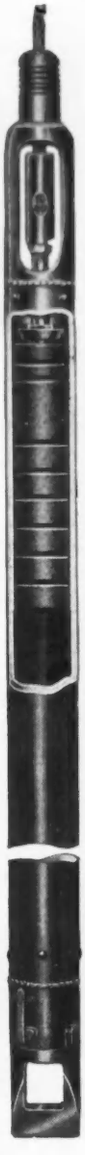
"Well, it doesn't. I sent the maid down there with a note telling them I wanted to borrow $100 and they wouldn't give it to her."

a name to Remember!

MILLER Sand Pump

Day after day — for years, oil men throughout the world clean-out sand and sediment, increase production quickly and inexpensively with MILLER Sand Pumps.

The MILLER is made in diameters of 2½, 3, 3½, 4, 4¼, 5, 5½, 7 and 9 inches and lengths of 20, 25 and 30 feet. 5/32-inch wall thickness in REGULAR Type, ¼-inch wall tubes HEAVY DUTY Sand Pumps.



INTERCHANGEABLE BOTTOMS
To Meet Every Condition

● BAILER BOTTOM
With the Bailer Bottom installed the MILLER is quickly changed to a Bailer giving you a combination of either Bailer or a Sand Pump in one tool.

● SAND BOTTOM
Used when tools are run and when well is shot to quickly remove loose material.

● STAR BOTTOM
Used for cutting the sand loose.

● CHISEL BOTTOM
(In Pump)
With this bottom tightly packed sand can be easily broken in small pieces so it can be picked up in the pump.

Write for Descriptive Folder and Price List

See Pages 1672-73 COMPOSITE CATALOG

MILLER Sand Pump Co.

PATENTED NO. 1570340 NO. 1823908 NO. 1787200 NO. 1662626 NO. 1666626 NO. 2056457

General Offices and Factory:

OKLAHOMA CITY, OKLAHOMA
1524 S. E. 29th P.O. Box 4516 Tel. 7-6884

Branches:
SAPULPA, OKLAHOMA—Tel: 341
KILGORE, TEXAS—Tel: 545

FOR SALE BY SUPPLY STORES EVERYWHERE

INDEX TO ADVERTISERS

*** Indicates that detailed information on the manufacturer's products or services may be found in the 1940 edition of the Composite Catalog of Oil Field & Pipe Line Equipment.**

A

	Page
*Abercrombie Pump Co.	68
*Acme Fishing Tool Co.	—
Acme Gas Lift Co.	—
*Advanced Petroleum Equipment Corp.	—
Air Reduction Sales Co.	—
*Ajax Iron Works	—
*Alten's Foundry & Machine Works	—
*Aluminum Company of America	—
Aluminum Ore Co.	—
American Askania Corp.	—
American Assn. of Petroleum Geologists	—
*American Cable Division of American Chain & Cable Co.	—
American Cast Iron Pipe Co.	—
*American Hammered Piston Ring Division of Koppers Co.	—
*American Iron & Machine Works Co.	—
*American Meter Co.	—
*American Sand-Banum Co.	—
*American Steel & Wire Co.	9
Atlas Drop Forge Co.	—
Atlas Supply Co.	—
*Axelson Manufacturing Co.	—

B

	Page
*Baash-Ross Tool Co.	5
*Baker Oil Tools, Inc.	3
Baldwin De La Vergne Sales Corp.	59
*Baldwin-Duckworth Division of Chain Belt Co.	—
*Baroid Sales Division	—
William M. Barret, Inc.	76
*The Barrett Co.	—
*Bartlett-Hayward Division of Koppers Co.	—
Bellevue-Stratford Hotel	73
*Bethlehem Steel Co.	—
*Bethlehem Supply Co.	33
*Black, Sivalls & Bryson	—
*Braden Steel Corp.	—
*Bradford Motor Works	—
*The Brewster Co.	—
The Bridgeport Machine Co.	—
*Broderick & Bascom Rope Co.	—
*Brown Oil Tools, Inc.	8
*The Buckeye Traction Ditcher Co.	—
Bucyrus-Erie Co.	—
*The Buda Co.	Third Cover
*Butler Manufacturing Co.	—
A. M. Byers Co.	12
*Byron Jackson Co.	—

C

	Page
Jo H. Cable	—
Mrs. Alice J. Cade	76
*Cameron Iron Works	37
*Cardwell Manufacturing Co.	—
Carnegie-Illinois Steel Corp.	—
*J. I. Case Co.	—
*Caterpillar Tractor Co.	—
*The Cavins Co.	—
*Chain Belt Co.	—
*Clark Bros. Co.	—
*Climax Molybdenum Co.	—
*Coffing Hoist Co.	—
Columbia Steel Co.	—
Columbian Steel Tank Co.	—
*Continental Motors Corp.	—
Continental Oil Co.	—
The Continental Supply Co.	—
*Fred E. Cooper Co.	—
*The Cooper-Bessemer Corp.	—
*Core Laboratories, Inc.	—
*Crane Co.	—
W. H. Curtin Co.	—

D

	Page
*Darling Valve & Manufacturing Co.	—
*Diamond Chain & Manufacturing Co.	—
*Dixon Valve and Coupling Co.	—
*Dowell Incorporated	—
*The Dragon Manufacturing Co.	50
*E. I. du Pont de Nemours & Co.	63

E

	Page
*Eastman Oil Well Survey Co.	43
Economy Electric Lantern Co.	—
Elastic Stop Nut Corp.	78
*Engineering Laboratories, Inc.	—

F

	Page
Failing Exploration & Drilling Co.	—
*Geo. E. Failing Supply Co.	—
First National Bank in Houston	—
First National Bank & Trust Co. of Tulsa	—
Fluid Packed Pump Co.	—
Ford Motor Co.	—
The Fort Worth Clearing House Assn.	—
The Fort Worth Laboratories	76
Fort Worth Steel & Machinery Co.	—
Frick-Reid Supply Corp.	—

G

	Page
*Gardner-Denver Co.	—
*The Garlock Packing Co.	71
*Gaso Pump & Burner Manufacturing Co.	—
Gay-Thornton Co.	—
*General Electric Co.	10
General Geophysical Co.	—
General Motors Sales Corp.	—
Geophysical Service, Inc.	—
*Globe Oil Tools Co.	—
*Goodyear Tire & Rubber Co.	—
*H. P. Gott Manufacturing Co.	—
*Gray Tool Co.	—
*Green Head Bit & Supply Co.	—
*The Guiberson Corp.	—
Gulf Envelope Co.	—
Gulf Oil Corporation	—
Gulf Publishing Co.	77

H

	Page
*Halliburton Oil Well Cementing Co.	First Cover
Hardway & Cathey	76
C. J. Harter, Machinery	—
*Haynes Stellite Co.	—
*Hazard Wire Rope Division of American Chain & Cable Co.	—
Heidle's Machine Works	—
The Hercules Powder Co.	—
*Hewitt Rubber Corp.	—
Hoard Exploration Co.	76
*Hobbs Manufacturing Co.	—
Houston Laboratories	76
Houston Pipe Appliances Co.	—
*Hughes Tool Co.	Fourth Cover
Humble Oil & Refining Co.	—
*Hunt Tool Co.	45
Hyatt Bearings Division	—

I

	Page
Independent Exploration Co.	—
*Ingersoll-Rand Co.	—
*International Harvester Co.	—
*The International Nickel Co.	—

J

	Page
Jarecki Manufacturing Co.	—
*Jensen Brothers Manufacturing Co.	—
*Johns-Manville	65
*M. O. Johnston Oil Field Service Corp.	—
The S. M. Jones Co.	—
*Jones & Laughlin Steel Corp.	Second Cover

K

	Page
*Kerotest Manufacturing Co.	—
*Keuffel and Esser Co.	39
*Kibele Manufacturing Co.	79
*Kinzbach Tool Co.	—
*Kobe, Inc.	7
*Koppers Co.	—

L

	Page
Landis Machine Co.	—
*Lane-Wells Co.	41
*Larkin Packer Co.	14
The Thomas Laughlin Co.	—
*The Layne & Bowler Co.	—
Lebanon Steel Foundry	4
*Le Roi Co.	—
*A. Leschen & Sons Rope Co.	—
*The Lincoln Electric Co.	—
*Line Scale Co.	—
*Link Belt Co.	—
Lone Star Cement Corp.	—
*Lucey Boiler & Manufacturing Co.	—
*Lucey Export Corporation	—
*The Ludlow Valve Manufacturing Co.	—
*Lufkin Foundry & Machine Co.	—

M

	Page
*MacClatchie Manufacturing Co.	—
Macwhyte Co.	—
P. R. Mallory & Co., Inc.	47
Mark Twain Hotel	50
The Marley Co.	—
Marmon-Herrington Co.	—
*John N. Martin, Manufacturer	—
McCollum Exploration Co.	—
*McEvoy Co.	—
McKissick Products Corp.	80
*Merco Nordstrom Valve Co.	Insert 50-51
*Merla Tool Corp.	—
*Metric Metal Works	—
*Midco Bailer Co.	—
*Miller Sand Pump Co.	81
*Minneapolis-Moline Power Implements Co.	—
*Mission Manufacturing Co.	31
*Lee C. Moore & Co.	—
*Morse Chain Co.	—
Mott-Smith Corp.	—
Mudrite Chemicals, Inc.	—
Murray Rubber Co.	—

N

	Page
National Bank of Tulsa	—
*National Lead Co.	—
The National Supply Co.	—
National Tube Co.	—
Norvell-Wilder Supply Co.	—
*Novo Engine Co.	—

O

	Page
*Oil Center Tool Co.	—
*Oil City Brass Works	—
Oil Well Supply Co.	—
*Otis Pressure Control, Inc.	—

P

	Page
*The Parkersburg Rig & Reel Co.	—
*Patterson-Ballagh Corp.	35
*Pelican Well Tool & Supply Co.	67
Petroleum Electric Power Assn.	—
Petroleum Rectifying Co. of California	—
*Pittsburgh Equitable Meter Co.	—
*Pittsburgh Steel Co.	—
Plymouth Cordage Co.	—

R

	Page
Reading-Pratt & Cady Division of American Chain & Cable Co.	53
*Rector Well Equipment Co.	78
*Reda Pump Co.	—
*Reed Roller Bit Co.	—
*Regan Forge & Engineering Co.	—
*Joseph Reid Gas Engine Corp.	—
*Republic Steel Corp.	—
*The Rex Co.	—
*The Ridge Tool Co.	—
John A. Roebling's Sons Co.	—

S

	Page
Safety Gas Main Stopper Co.	78
Jack A. Schley	76
*Schlumberger Well Surveying Corp.	—
The Second National Bank of Houston	—
*Security Engineering Co.	—
Seismic Exploration Co.	—
Seismograph Service Corp.	—
Shell Oil Co., Inc.	—
Shilstone Testing Laboratory, Inc.	76
*SKF Industries, Inc.	—
A. O. Smith Corp.	—
*E. M. Smith Co.	—
*South Chester Tube Co.	—
Southern Engine & Pump Co.	—
Southern Pacific Lines	69
Spang Chalfant, Inc.	—
*Spang & Company	—
*Sperry-Sun Well Surveying Co.	55
Standard Supply and Hardware Co.	—
*Standco Brake Lining Co.	79
*Star Drilling Machine Co.	—
Straus-Bodenheimer Co.	—

T

	Page
E. C. Tecktonius Manufacturing Co.	—
*Templeton, Kenly & Co.	—
Texaco Development Corp.	—
The Texas Co.	—
Texas Electric Steel Casting Co.	—
The Thermoid Co.	—
*The Timken Roller Bearing Co.	—
Edgar Tobin Aerial Surveys	6
*Tretolite Co.	—
Trinity Portland Cement Co.	—
Tulsa Shock Absorber Co.	—
*Twin Disc Clutch Co.	—

U

	Page
*Union Wire Rope Corp.	—
*Union Carbide & Carbon Corp.	—
*United States Rubber Co.	—
United States Steel Corp.	9, 11
*Universal Atlas Cement Co.	11

V

	Page
*Vickers, Inc.	—

W

	Page
Warner & Swasey Co.	—
*Waukesha Motor Co.	—
*Well Machinery & Supply Co.	—
Well Surveys, Inc.	—
Western Electric Co.	—
*Westinghouse Electric & Manufacturing Co.	—
*Wheeling Machine Products Co.	—
*The Wheland Co.	—
Wichita Engineering Co.	—
*Wickwire Spencer Steel Co.	—
*J. H. Williams & Co.	—
*Wilson Manufacturing Co.	—
*Wilson Supply Co.	—
Witte Engine Works	—
Worth Hotel	66
*Worthington Pump & Machinery Corp.	60
Wyatt Metal & Boiler Works	—

Y

	Page
Youngstown Sheet & Tube Co.	29

THE OIL WEEKLY

AUGUST 26, 1940

VOLUME 98 NUMBER 12

The Week's Panorama

MEASURED by the revised index of the Federal Reserve Board, industrial activity now is above the high point of 1929, as well as substantially above a year ago.

• • • The new index of industrial production reflects activity in several young and growing industries that were not represented in the board's old index. The new index is based on production for 1935-1939 as 100 percent, whereas the old index used the 1923-1925 average as 100. The new index shows a higher peak of industrial production in 1937 than in 1929, although the old index failed to go quite as high in 1937 as in 1929.

• • • The national income of the United States for the first half of 1940 has been estimated at 5 percent in excess of that in the corresponding period of 1939.

• • • A survey made for federal government officials indicated that all manufacturing companies in the aggregate would show more profit for 1940 than for 1937 and approximately as much as for 1929. First-half earnings were not quite as good in 1940 as in 1937, but latter-half results should be better, it is expected, as a repetition of the collapse of late 1937 is considered unlikely.

• • • The oil industry should have materially less difficulty during the coming fall and winter than in the similar periods of 1939-1940 in supplying consumers' requirements of heating oil, stocks of that product being in better relationship to increased demand than they were a year ago. Storage is 6,000,000 barrels greater than at this time last year, and the inventory situation will be further improved by the end of September if refiners will continue to take relatively large yields of light fuel oil from the crude they process, while holding down the yield of gasoline, stocks of which are materially excessive. . . . The situation has been improved not only by regulation of refinery yields but also by increased imports of fuel oil and smaller export requirements. Shipments abroad were 4,600,000 barrels smaller in the first 6 months of 1940 than in the corresponding months of 1939.

• • • Crude oil stocks are almost back up to the same level as before the Mid-Continent oil field shutdowns a year ago. The inventory of 263,607,000 barrels on hand August 10 compared with 267,536,000 barrels held a year previously. Changes from a year ago included these withdrawals: Texas outside East and West Texas, 5,000,000 barrels, Oklahoma 4,000,000, Rocky Mountain states 3,000,000, California light oil 1,000,000, North Louisiana 1,000,000, Michigan-Lima 500,000, Pennsylvania 1,000,000. Partially offsetting those withdrawals have been the following additions to storage: Illinois-Indiana 7,000,000 barrels, Kansas 1,500,000, New Mexico 1,500,000, West Texas over 1,500,000, East Texas 500,000.

• • • The average retail price of gasoline in 50 cities rose from 12.53 cents on July 1 to 12.58 cents August 1, the American Petroleum Institute reported.

• • • If United States citizens should be called upon for per-capita military expenditures as great as those now shouldered by the British ($260 annually), the U. S. cost for military purpose would be $34,000,000,000 a year. And if 40 percent of such expenditures were covered by current revenue, as are the British expenditures at present, the taxes for the purpose would bear down to the extent of $14,000,000,000 yearly. . . . Great Britain's 46,000,000 people now are spending at the rate of $12,000,000,000 annually in their total-war effort.

• • • Reported as the largest single order of that nature so far placed was that by Atlantic Coast Line Railroad for 18 Diesel-electric passenger locomotives.

• • • Of the total production of electric energy for public use in June, 37 percent was by water power and 63 percent by fuels. Fuels consumed during the month included 1,014,243 barrels of fuel oil, 15,845,936,000 cubic feet of natural gas, and 3,867,965 short tons of coal.

• • • Technologists say it is practicable and desirable for industrial concerns to spend 2 percent of their gross income for research, as a survey of 188 companies showed such an average expenditure for that purpose.

• • • A wildcat being drilled in Harrison County, West Virginia, is described as the first rotary-drilled test in that state. It will test the Oriskany sand, lower Devonian, expected at about 7300 feet.

• • • Automotive engineers envisage greatly changed automobiles for the future. They foresee rear-engined cars of greater speed and agility, synthetic-rubber tires, synthetic-rubber springs, and spread of air-conditioning from inter-city busses to private vehicles.

Current Statistical Position of the Oil Industry

By FRED VAN COVERN
Director, Department of Statistics, American Petroleum Institute

IN contemplating the outline of this paper, I thought it desirable to depart from its specific title to some extent, at least, and to prepare my remarks in the form of three general classifications as follows:

1. **A review of the situation as it existed at the beginning of the 1940 summer season, or, on March 31;**
2. **The developments so far during the summer and the probable general position as of the end of September; and**
3. **An attempt to look ahead through the last quarter of 1940, and the first quarter of 1941.**

WE are, of course, all familiar with the conditions which surrounded supply and demand and condition of inventories of gasoline and furnace oils as they existed at the end of last winter. All will recall that on September 30, 1939, gasoline stocks were already high but that furnace oil inventories as of that date proved inadequate in the face of the very severe winter weather which followed. As a result, gasoline inventories on March 31, 1940, established a record-high level and stocks of distillate fuels were greatly depleted. In review of that situation, comparative figures of the inventories of those two products, as the industry entered the past winter and the current summer season, are indicated, by refinery districts, in Table 1.

Other important items that were in mind at that time were the trend of the export market and the sustained downward trend of our own domestic business activity. It was, nevertheless, a fact that during the first quarter of this year the demand for the industry's principal product increased domestically about 5½ percent. With the exports of gasoline falling off very nearly half, the total demand for motor fuel was, however, only 1.4 percent greater than during the first quarter of 1939. The combined domestic and export demand for distillate fuels and heavy fuel oils indicated increases of slightly less than 18 percent and 5 percent respectively during this three-months period.

TABLE 1
(Barrels of 42 Gallons)
(All figures are from U. S. Bureau of Mines)

DISTRICT	Finished and Unfinished Gasoline Inventories		Gas Oil and Distillate Fuel Oil Inventories	
	Sept. 30, 1939	March 31, 1940	Sept. 30, 1939	March 31, 1940
East Coast	18,653,000	22,472,000	13,094,000	5,683,000
Louisiana Gulf	1,988,000	3,007,000	852,000	631,000
Texas Gulf	11,439,000	19,383,000	6,455,000	3,306,000
	32,080,000	44,862,000	20,401,000	9,620,000
Ind., Ill., Ky.	11,778,000	19,979,000	4,810,000	2,452,000
Okla., Kansas	6,007,000	8,983,000	1,821,000	881,000
Inland Texas	1,919,000	2,851,000	363,000	128,000
No. La.-Ark.	488,000	947,000	218,000	125,000
	20,192,000	32,760,000	7,212,000	3,586,000
Appalachian	2,715,000	4,502,000	318,000	312,000
Rocky Mountain	1,376,000	2,514,000	227,000	266,000
East of California	56,363,000	84,638,000	28,158,000	13,784,000
California	14,629,000	19,072,000	9,980,000	9,302,000
Total United States	70,992,000	103,710,000	38,138,000	23,086,000
Prevoius Year	69,086,000	87,121,000	*	25,899,000

* Not available for 1938 on a completely comparable basis.

Crude oil inventories and runs to stills were showing sustained trends upward and probably were directly related to the increasing level of crude oil production. Distillate-fuel-oil burners were continuing to be installed at a rapid rate and automobile sales were going ahead very fast. Taken all in all the industry seemed to have a job on its hands in properly balancing the various pluses and minuses in the then-existing situation.

Upturn in May

The rapid decline in business activity of the first quarter tapered off in April, the Federal Reserve Board Index reaching a low of 102 during that month. The trend turned upward, however, in May, increasing each month since then and to such an extent that our latest estimates show a level of 115 for the week ended August 10.

Sales of motor vehicles, which were high during even the first

TABLE 2

Crude Oil Production—Daily Averages

(Barrels of 42 Gallons)

DISTRICT	WEEKS ENDED July 6, 1940 A.P.I.	July 13, 1940 A.P.I.	July 20, 1940 A.P.I.	July 27, 1940 A.P.I.	Aug. 3, 1940 A.P.I.	Aug. 10, 1940 A.P.I.
Oklahoma	427,900	409,800	417,250	405,800	410,000	381,800
Kansas	182,450	178,200	189,950	186,200	183,150	169,150
Texas	1,138,350	1,143,350	1,168,050	1,354,200	1,169,900	1,176,000
California	625,700	625,100	617,600	606,000	601,600	631,800
Illinois	503,650	485,850	460,500	418,450	406,650	395,050
Arkansas	71,300	72,400	72,450	72,600	72,400	73,050
Louisiana	287,950	281,950	285,950	279,750	280,100	281,400
New Mexico	105,050	105,050	104,350	105,100	105,050	101,600
Michigan	55,900	54,150	54,100	53,600	54,750	54,150
Others	204,150	204,900	210,150	208,700	209,950	211,300
Total U. S.	3,602,400	3,560,750	3,580,350	3,690,400	3,493,550	3,475,300
Total East of Calif.	2,976,700	2,935,650	2,962,750	3,084,400	2,891,950	2,843,500

quarter, continued at a level 26 percent greater than in the previous year, during the second quarter, resulting in a 27 percent increase in motor vehicle sales during the first half of this year, and contributing to an increase of more than 4 percent in the total number of vehicles in use during the first six months.

Coincident with this first-half trend of motor vehicle sales and registrations, domestic demand for motor fuel increased slightly over 7 percent. Exports, reflecting events abroad, continued downward with the exception of June, showing a 47 percent decline when compared with the first half of 1939. As a result, total demand upon American refiners for their principal product increased but 3.0 percent during this six-months period. Crude oil production and runs to stills continued at economically unjustifiably high levels, however, and increased to such an extent that a record daily rate of refinery runs of almost 3,700,000 barrels per day was established during the week ended June 22, and an average of just over 3,600,000 barrels daily for the month.

As a result, motor-fuel inventories were drawn on only to the extent of 10,000,000 barrels during the second quarter, leaving a June 30 total of finished and unfinished gasoline at 93,600,000 barrels in comparison with 103,700,000 barrels on March 31.

Crude-oil production which saw a high of 3,800,000 barrels daily in March, and only slightly less in April, turned down to some extent in May and June and has been establishing an almost unbroken series of lower levels since July 6, when production was approximately 3,600,000 barrels daily. The latest figures available as this was written were those of August 10, during which week crude-oil production averaged 3,475,000 barrels per day. This trend is indicated in Table 2.

Still Runs Decline

The daily average rate of crude oil run to stills has also shown an almost continuous series of declines recently. During the seven-weeks period ended August 10 in every week with the exception of one, that of July 27 in which there was a relatively small increase, runs to stills have registered declines indicating a falling off in the amount charged to refineries from a high level of 3,690,000 barrels per day as of June 22 to 3,435,000 barrels daily during the week ended August 10, a decline in the daily rate of runs of 255,000 barrels during this period. This undoubtedly is significant of the understanding and attitude of refiners generally.

Table 3 shows the details of these figures, by districts and important groupings, during the period referred to.

While crude-oil production and runs to stills worked up in almost continuous trends, remaining high through the entire first half of the year, crude oil inventories were also increasing. True, the recent rate of increase in crude stocks has slowed up some in comparison with the earlier months, probably being affected by the recent trend of production, but these inventories are, nevertheless, still going up as Table 4 will show.

The trend of gasoline inventories which accelerated downward during June, influenced to some extent, no doubt, by forward buying in anticipation of the then proposed increase in the federal gasoline tax, which later became an actuality, slowed up some in July as a direct reflection.

The latest figures available are those of August 10. They show a total inventory of finished and un-

TABLE 3

Crude Oil Runs to Stills—Daily Averages

(Barrels of 42 Gallons)

DISTRICT	WEEKS ENDED June 22, 1940 A.P.I.	July 6, 1940 A.P.I.	July 20, 1940 A.P.I.	Aug. 3, 1940 A.P.I.	Aug. 10, 1940 A.P.I.
East Coast	603,000	529,000	547,000	549,000	558,000
Louisiana Gulf	120,000	139,000	116,000	121,000	126,000
Texas Gulf	932,000	934,000	917,000	915,000	846,000
	1,655,000	1,602,000	1,580,000	1,585,000	1,530,000
Ind., Ill., Ky.	654,000	673,000	655,000	616,000	592,000
Okla., Kans.	331,000	315,000	321,000	309,000	314,000
Inland Texas	173,000	161,000	171,000	161,000	177,000
No. La. and Ark.	66,000	72,000	67,000	70,000	77,000
	1,224,000	1,221,000	1,214,000	1,156,000	1,160,000
Appalachian	128,000	123,000	131,000	127,000	125,000
Rocky Mountain	79,000	79,000	77,000	88,000	104,000
East of California	3,086,000	3,025,000	3,002,000	2,956,000	2,919,000
California	604,000	550,000	538,000	554,000	516,000
Total United States	3,690,000	3,575,000	3,540,000	3,510,000	3,435,000

TABLE 4

Crude Oil Inventories by Field or State of Origin

(Barrels of 42 Gallons)
(U. S. Bureau of Mines)

	1939 High April 30	*1939 Low Oct. 31	1940 Low Jan. 1	June 30, 1940	Last Available Aug. 10, 1940
Penna. Grade	5,647,000	4,972,000	4,624,000	4,480,000	4,666,000
Other Appalachian	1,278,000	1,547,000	1,365,000	1,331,000	1,439,000
Lima, N. E. Ind., Mich.	1,988,000	2,036,000	1,612,000	1,461,000	1,458,000
Ill., S. W. Indiana	13,183,000	17,041,000	16,932,000	21,666,000	21,607,000
No. La.-Ark.	9,205,000	6,113,000	6,401,000	7,848,000	7,991,000
W. Texas-S. E. N. Mex.	22,541,000	20,249,000	21,403,000	26,089,000	25,244,000
East Texas	22,660,000	13,613,000	15,558,000	18,689,000	19,707,000
Other Mid-Continent	108,311,000	86,330,000	89,326,000	97,454,000	98,268,000
Gulf Coast	30,091,000	23,532,000	25,605,000	28,398,000	27,520,000
Rocky Mountain	20,490,000	17,835,000	17,891,000	16,135,000	16,114,000
East of California	235,394,000	193,268,000	200,617,000	223,551,000	224,014,000
California	39,699,000	35,533,000	35,478,000	35,368,000	36,344,000
Total—Domestic	275,093,000	228,801,000	236,095,000	258,919,000	260,358,000
Foreign—(East of Cal.)	3,472,000	2,053,000	2,815,000	3,052,000	3,249,000
Total Domestic and Foreign	278,565,000	230,854,000	238,910,000	261,971,000	263,607,000

* Lowest since January 31, 1922. Lease stocks are included above.

finished gasoline of 88,100,000 barrels, a decline of about 15½ million since March 31, but still 12 million barrels greater than on the corresponding date in 1939.

This 12 million barrels difference is in direct comparison with the 16½ million barrel greater inventories on March 31 of this year. In other words, while the industry entered the current season with inventories 16½ million barrels greater than a year ago, the difference which existed on August 10 was 12 million, a 4½ million barrel relative improvement.

Finished and unfinished gasoline inventories are shown by districts as of comparable dates in Table 5.

It is, of course, both timely and very interesting to look ahead in an attempt to forecast what the level of these inventories may be on September 30 and what these relationships may show in comparison with last year. Doing this involves many uncertainties, however. Is crude oil production going to remain at or near present levels? Are runs to stills going to continue at approximately the current rate? If they do, and if present expected demand materializes—and the latter probably is the least uncertain—these inventories may total 78 million barrels. I shall not attempt to break this figure up into the various Bureau of Mines' refinery districts, but making a separation as between California and the area East of California, the figures appear at this time to be about as follows:

September 30	East of California	California	United States
1940	62,000,000	16,000,000	78,000,000
1939	56,363,000	14,629,000	70,992,000

The 78-million-barrel figure compares, of course, with last summer's 71 million barrels. I believe it would, however, be difficult to deny the statement that last year's 71 million level was more than ample, and that it was more than necessary to operate distributing and marketing facilities properly and economically.

So, while the completion of this summer season may see the greatest amount of gasoline withdrawn from storage that has ever been recorded during any similar period (25,700,000 barrels) the industry's disadvantage entering the coming winter in relation to economic minimum operating requirements will be greater than a year ago. It is important, I think, however, to state right here that the current light fuel oil situation has a very direct bearing on, and relationship to, what has just been said.

Expected Fuel Demand Increase

That progress has been made in building up fall inventories of gas oil and distillate fuels is apparent from current trends. Of course, the districts most vitally concerned are the East Coast, Louisiana and Texas Gulf Coasts, and to a lesser extent, the Indiana-Illinois and Oklahoma-Kansas regions. There will probably be 2,150,000 home-heating oil burners in use on an average during next winter, an increase of 13 percent over the average in use during the previous winter. In relation to the kind of weather that will prevail, the domestic demand for gas oil and distillate fuel, of which heating oil comprises the major portion, probably will increase from 12 to 17

TABLE 5

Finished and Unfinished Gasoline Inventories

(Barrels of 42 Gallons)

DISTRICT	March 31, 1940 U.S.B.of M.	July 31, 1940 Estimated	August 10, 1940 Estimated	August 10, 1939 *U.S.B. of M.	Sept. 30, 1939 U.S.B.of M.
East Coast	22,472,000	22,426,000	21,683,000	20,882,000	18,653,000
Louisiana Gulf	3,007,000	2,725,000	2,780,000	2,182,000	1,988,000
Texas Gulf	19,383,000	16,367,000	16,334,000	11,084,000	11,439,000
	44,862,000	41,518,000	40,797,000	34,148,000	32,080,000
Ind., Ill., Ky.	19,979,000	16,283,000	15,805,000	12,820,000	11,778,000
Okla., Kans., Mo.	8,983,000	6,699,000	6,562,000	6,581,000	6,007,000
Inland Texas	2,851,080	2,536,000	2,538,000	2,042,000	1,919,000
No. La.-Ark.	947,000	757,000	716,000	615,000	488,000
	32,760,000	26,275,000	25,621.000	22,058,000	20,192,000
Appalachian	4,502,000	3,716,000	3,757,000	3,551,000	2,715,000
Rocky Mountain	2,514,000	1,654,000	1,610,000	1,533,000	1,376,000
East of California	84,638,000	73,163,000	71,785,000	61,290,000	56,363,000
California	19,072,000	16,621,000	16,330,000	14,776,000	14,629,000
Total United States	103,710,000	89,784,000	88,115,000	76,066,000	70,992,000

* Estimated from Bureau of Mines July 31 and August 31 figures so as to make possible a comparison with latest available 1940 figures.

TABLE 6

Refinery and Bulk Terminal Inventories of Gas and Distillate Fuel Oils and Yields of Light Fuels and Gasoline in Certain Geographical Areas—1939 and 1940

	Jan. 1	Jan. 31	Feb. 28-29	March 31	April 30	May 31	June 30	July 31	August 31	Sept. 30	Estimated Economic Requirements, Sept. 30, 1940
EAST COAST & GULF COASTS:											
Inventories (barrels)...1939	19,849,000	16,605,000	14,034,000	12,025,000	11,732,000	12,963,000	15,784,000	18,425,000	19,966,000	20,401,000	.....
Inventories (barrels)...1940	16,924,000	12,210,000	11,257,000	9,620,000	11,158,000	13,516,000	17,640,000	*22,300,000	.....	.....	28,000,000
Yield Gas & Distillate Fuel (Percent).....1939	.....	17.4	18.4	16.8	15.7	14.5	16.5	14.7	14.9	15.2	.....
Yield Gas & Distillate Fuel (Percent).....1940	.....	19.5	22.2	18.9	18.7	16.7	17.1	.....	.....	.....	.....
Yield Gaso. (Percent)..1939	.....	42.0	41.1	41.3	42.3	42.1	41.6	41.6	42.7	42.2	.....
Yield Gaso. (Percent)..1940	.....	38.5	39.1	38.5	40.1	37.4	39.2	.....	.....	.....	.....
INDIANA, ILLINOIS, KENTUCKY:											
Inventories (Barrels)...1939	4,065,000	3,510,000	2,860,000	2,211,000	2,327,000	2,619,000	3,270,000	3,984,000	4,692,000	4,810,000	.....
Inventories (Barrels)...1940	4,372,000	3,026,000	2,571,000	2,452,000	2,505,000	2,993,000	4,025,000	*4,925,000	.....	.....	6,500,000
Yield Gas & Distillate Fuel (Percent).....1939	.....	11.2	10.8	9.0	9.7	7.8	8.7	9.0	10.6	9.4	.....
Yield Gas & Distillate Fuel (Percent).....1940	.....	12.6	10.9	10.9	9.8	9.9	10.8	.....	.....	.....	.....
Yield Gaso. (Percent)..1939	.....	55.2	54.7	53.7	54.5	52.9	56.1	54.7	56.2	56.5	.....
Yield Gaso. (Percent)..1940	.....	53.3	50.4	51.7	52.9	54.8	53.8	.....	.....	.....	.....
OKLAHOMA, KANSAS, MISSOURI:											
Inventories (Barrels)...1939	1,491,000	1,471,000	1,318,000	1,154,000	1,202,000	1,376,000	1,603,000	1,801,000	1,784,000	1,821,000	.....
Inventories (Barrels)...1940	1,544,000	1,138,000	952,000	881,000	927,000	1,028,000	1,209,000	*1,420,000	.....	.....	2,500,000
Yield Gas & Distillate Fuel (Percent).....1939	.....	11.8	11.6	10.5	9.7	9.6	9.2	9.1	7.7	9.4	.....
Yield Gas & Distillate Fuel (Percent).....1940	.....	14.1	10.6	10.2	9.8	8.9	8.8	.....	.....	.....	.....
Yield Gaso. (Percent)..1939	.....	53.5	54.4	54.2	53.1	53.0	53.1	52.4	53.3	54.3	.....
Yield Gaso. (Percent)..1940	.....	52.2	48.8	51.1	49.8	51.5	53.9	.....	.....	.....	.....
Total	.....	.....	.....	.....	.....	.....	.....	.....	.....	27,032,000	37,000,000
Rest of Country	.....	.....	.....	.....	.....	.....	.....	.....	.....	11,106,000	11,000,000
Grand Total	.....	.....	.....	.....	.....	.....	.....	.....	.....	38,138,000	48,000,000

Note: Figures indicated thus (*) estimated, others are U. S. Bureau of Mines.

percent, when compared with the demand for these oils during the last winter period calculated from October 1 to March 31. Exports probably will continue to show a considerable decline with the result that the total demand for these oils may be between 6 and 9 percent greater.

Under these circumstances, the 38 million barrels of these products in storage at refineries and terminals on September 30, 1939, would again prove inadequate. It is my opinion that the 48 million barrels, broken up by districts as shown in Table 6, would result in more economic stock levels during next winter and prevent a scarcity of supply such as threatened in certain areas during last winter.

The East Coast and Gulf Coast districts have made considerable progress toward this end as has the Indiana-Illinois region, but Oklahoma-Kansas seems to be falling behind.

Yields of light fuels in the coastal areas have been consistently higher than last year, and yields of gasoline consistently lower, with the result that on July 31 they had 4 million barrels greater inventories of gas oil and distillate fuel than a year ago. These yields seem to have continued into August and it is my firm conviction that if present trends continue, this area will move into the coming winter season not only better fortified against real cold weather than at the beginning of last winter, but at or very close to the amount of inventories required to assure ample supplies without the necessity of producing large quantities of unnecessary gasoline. Somewhat the same comment can be made with respect to the Indiana-Illinois region but as was intimated earlier the Oklahoma-Kansas area had less light fuels in storage on July 31 this year than last.

Another item of interest in connection with the position in which the industry will move into next winter's heating season is the condition of inventories of unfinished oils. In the coastal region these stocks were built up during the second quarter approximately 2½ million barrels, while in the Indiana-Illinois and Oklahoma-Kansas areas, the increase amounted to approximately 700,000 barrels in each. It is only speculation, of course, but I should not be at all surprised if these increases in unfinished stocks reflected additional quantities of gas oil which could be cracked into gasoline or used directly as light fuels should the occasion arise.

Table 6 contains what I think

[*Continued on page 48*]

APPENDIX 1

Export Shipments of Crude Oil and Principal Refined Products

(Barrels of 42 Gallons)

(U. S. Bureau of Mines Data)

JANUARY TO JUNE 6 MONTHS PERIOD

	1939 (Barrels)	1940 (Barrels)	Percentage Change
Crude Oil	34,949,000	26,415,000	—24.4
Gasoline	23,395,000	13,090,000	—44.0
Kerosene	3,725,000	2,291,000	—38.5
Light Fuels	15,918,000	11,326,000	—28.8
Heavy Fuels	9,377,000	7,710,000	—17.8
Lubricants	5,258,000	6,759,000	+28.5
Total Principal Refined Products	57,673,000	41,176,000	—28.6
Total Exports Indicated	92,622,000	67,591,000	—27.0

Billings Unit . . .

Example of Practical Area Pressure

THE Billings field of Oklahoma is one of the outstanding examples of the value of applying pressure maintenance programs to relatively small areas. After development was substantially complete, operators owning all but a few extreme edge leases formed a unit to operate the Wilcox sand production of the pool. This made it possible to initiate careful reservoir control and to take advantage of a pronounced and efficient water drive. The sand has zones of varying permeability, and in order to prevent uneven water encroachment and to prolong the flowing life of wells, the rate of withdrawal was reduced voluntarily and pressure maintenance was instituted.

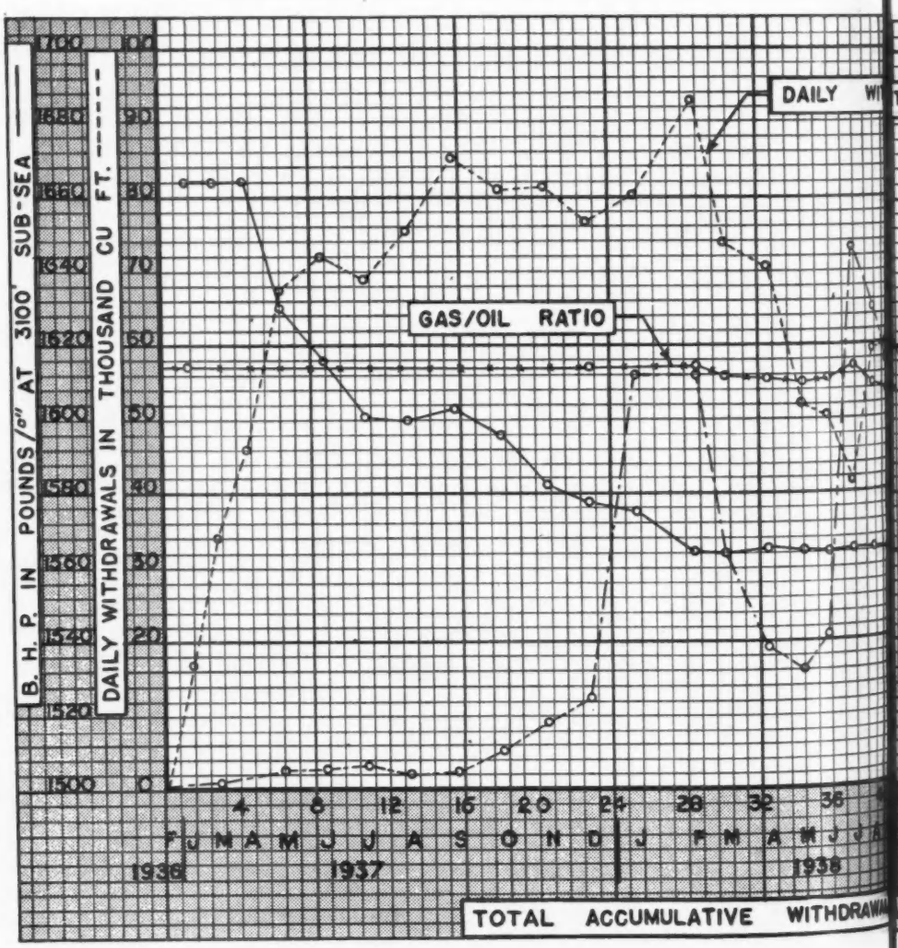
The bottom-hole pressure has been maintained within 93 percent of its original status, although 7½ million barrels of oil have been produced. The decline has been practically eliminated in recent months, indicating a long flowing life for the field. Although the field covers hardly more than one square mile and was substantially developed when unit operation was inaugurated, scientific exploitation is estimated to have accomplished a saving[1] of $500,000 by eliminating unneeded wells and prolongment of flowing life. It is further predicted that proper utilization of reservoir energy will reduce operating costs by an estimated $1,500,000. The lifting cost has been only a fraction over 3 cents per barrel.

The Billings field first produced from a shallow sand in February, 1917. The Wilcox sand, the horizon to which pressure maintenance is being applied, was not proven until 1936. Since that time a total of 69 producing wells has been drilled, 67 in the unitized block and two outside producers.

The properties within the proven area are owned by Continental Oil Company, Shell Oil Company, Inc., Phillips Petroleum Company, Champlin Oil Company and Midco Oil Corporation.

Although a gasoline plant commenced operating sometime previously, the repressuring unit was not put in operation until October 1, 1938. The accumulative gas volumes injected into the Wilcox sand until June 1, 1940, were 1,594,472,000 cubic feet. The daily injection

Comparison of Billings Bottom-Hole Pres



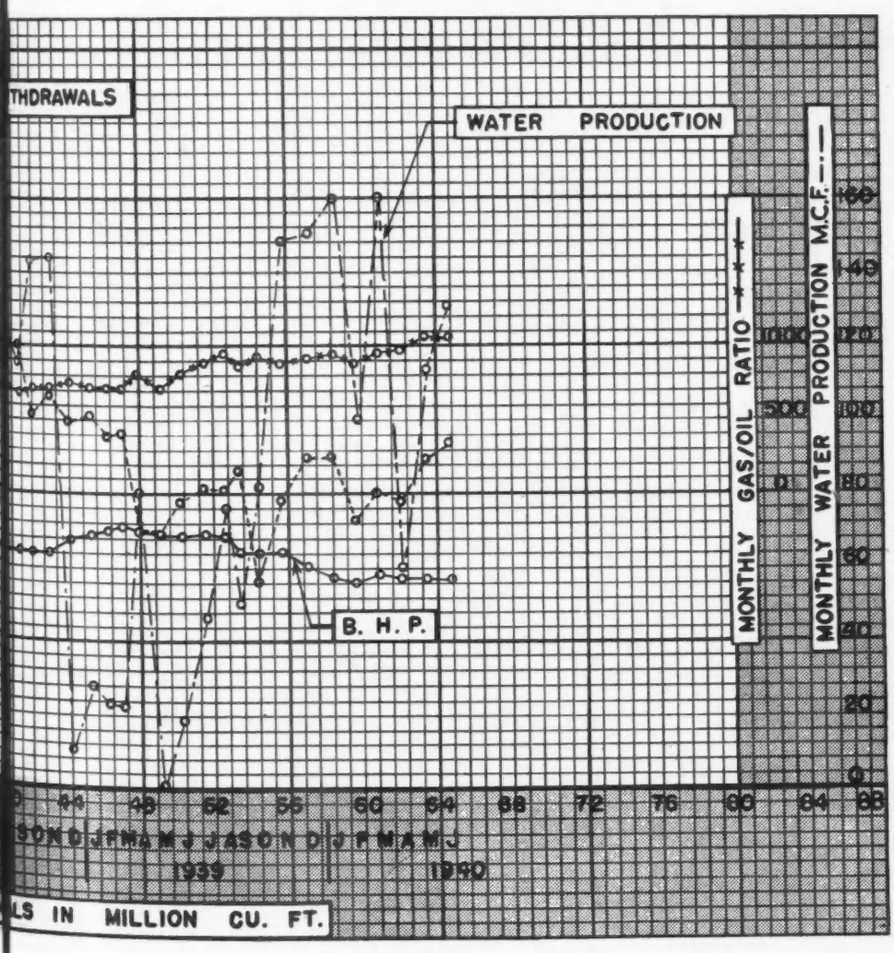
[1] Frank Phillips, "Sound Economics Must Be Teamed With Science in Future Course of Oil," The OIL WEEKLY, August 14, 1939.

Advantages of Small Maintenance

volume per injection well for the month of May was about 1,000,000 cubic feet, and the three wells received a total of 96,151,000 cubic feet during the month. High ratio producing wells were selected for injection purposes, as there was every reason to believe that they were in the gas cap instead of down structure where oil predominated.

The original bottom-hole pressure of the pool was 1664 pounds, which declined slowly until July 1, 1937, when it was 1567.1 pounds and which fell to 1566.1 pounds at the time the pressure maintenance was started. Since that time bottom-hole pressure has decreased but 10 pounds per square inch. The bottom-hole pressure drop during May, 1940, was only 0.3 pounds per square inch.

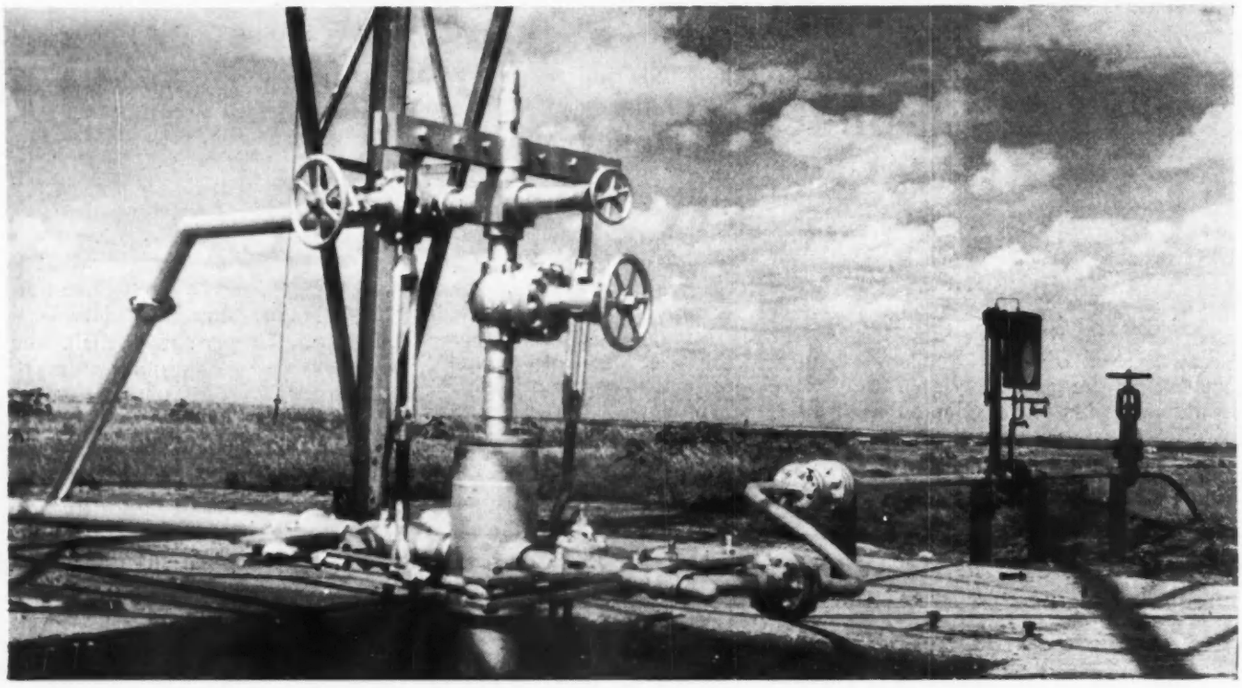
Pressure with Volumetric Withdrawals



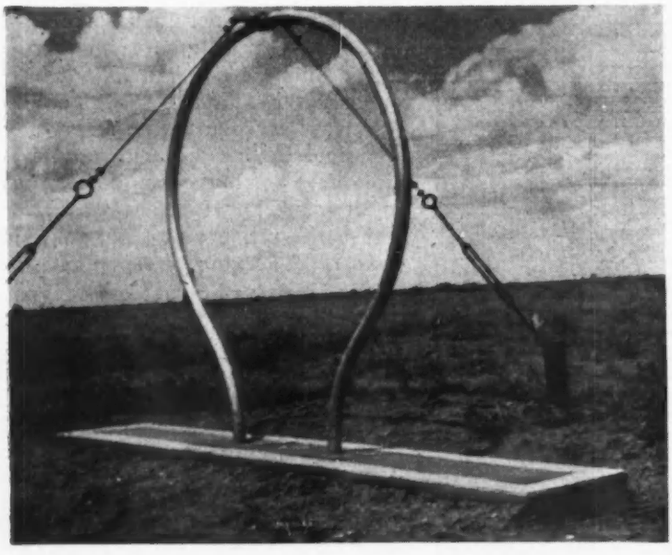
Since Wilcox sand commenced producing until June 1, 1940, the accumulative oil production amounted to 7,507,707 barrels, which represents a pressure drop of only 14.2 pounds per square inch per 1,000,000 barrels of oil recovered. The majority of this decline occurred prior to repressuring. As the pool is drilled on a 10-acre spacing pattern, the total accumulative production per well has been 108,807 barrels, or a per acre yield of 10,881 barrels. During last May, the production amounted to 183,370 barrels, which set up against the 0.3 pounds pressure decrease for the month amounted to about 0.00016 pounds per 1000 barrels of oil. The total volume of gas produced during May was 195,030,000 cubic feet of which 96,151,000 cubic feet was returned to the reservoir. The average gas/oil ratio was 1067 cubic feet per barrel of oil, but the input gas/oil ratio was 526 cubic feet per barrel, leaving a net gas/oil ratio of 541 cubic feet per barrel.

The Billings-Wilcox pool is a tilted block faulted on the southeast side with a water drive from the flanks, and in order to estimate the distance the water-oil contact has moved, and to know how much water is moving into the reservoir the following data have been prepared by engineers concerned with the project.

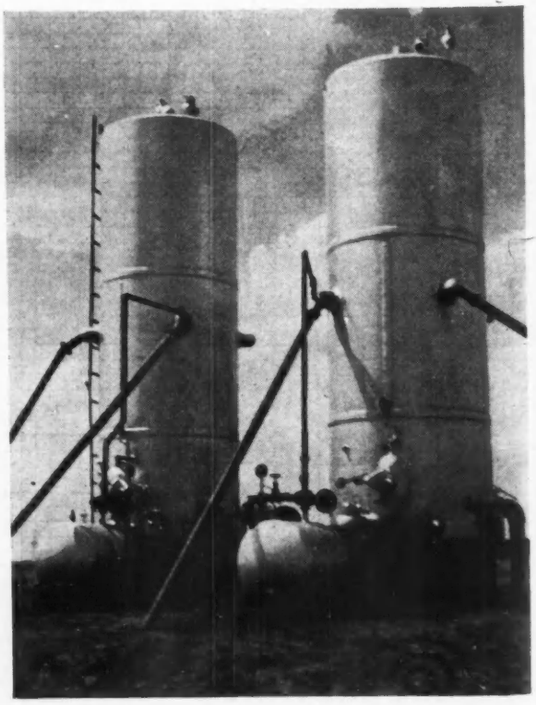
Assuming that the excess gas comes from the gas cap and will return to the gas cap when injected



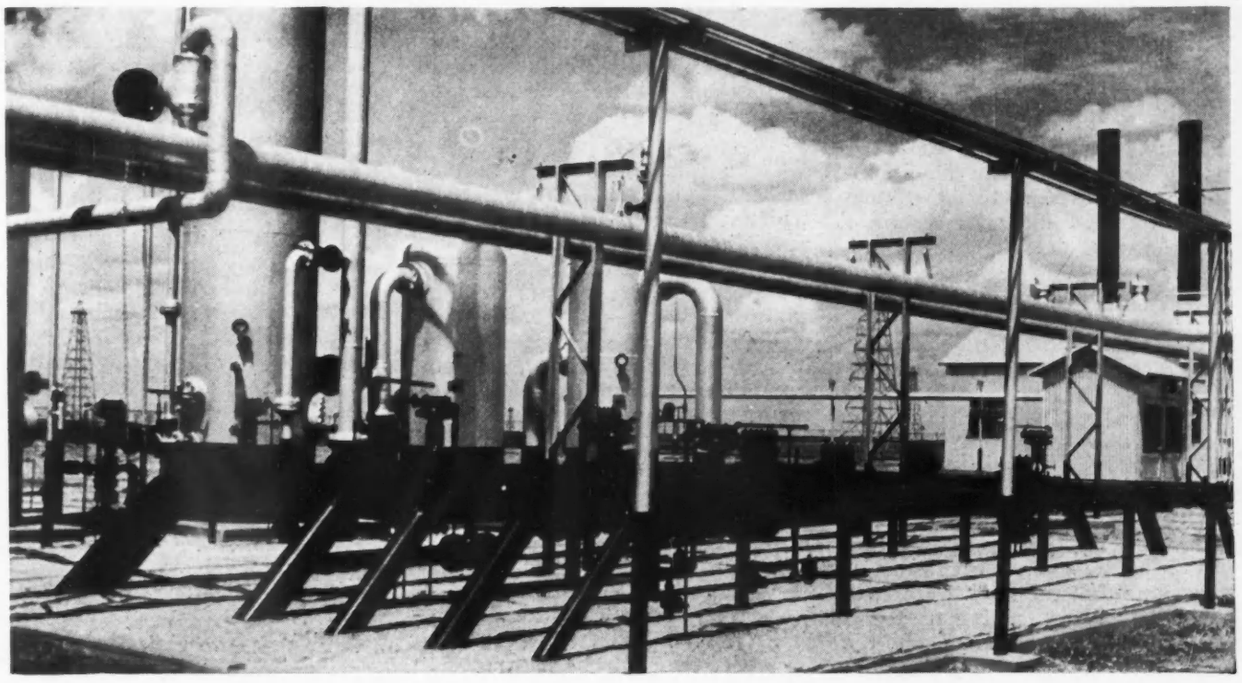
Christmas tree and piping arrangement on producing well converted to input. Tubing and flow lines remain in same position they formerly occupied, but gas injection inlet has been attached to side outlet of well head.



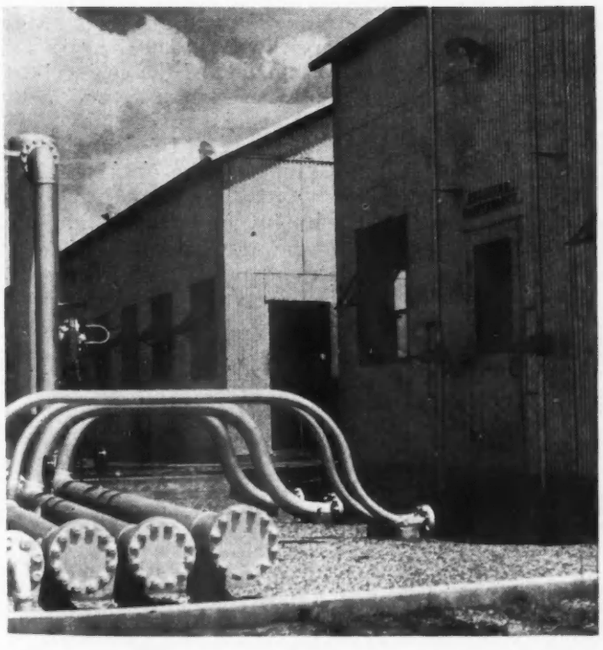
Loops have been placed at intervals throughout the field to compensate for expansion and contraction of high pressure distribution lines. Concrete boxes extend downward to buried depth of lines. Grate coverings prevent cattle or humans from falling into excavation.



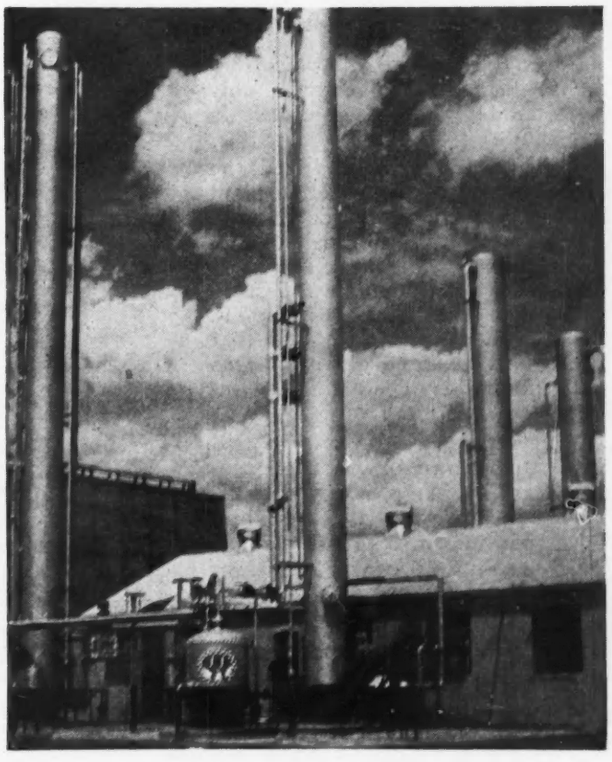
Gas is received by the gasoline plant from field separators at a pressure ranging from atmospheric to 10 inches mercury vacuum.



Residue gas leaving the absorber is piped into this header, where it is divided for the different lease fuel requirements.



Intake and discharge manifold at pressure maintenance plant, which adjoins gasoline plant. One operator can take care of both very conveniently.



Extraction and stabilizing columns at plant. Gasoline is produced at cooling outlets, but final stripping of raw gas is accomplished in 30?-pound absorber.

into the reservoir, and with gas volumes corrected for pressure and temperature changes, the following calculations have been made:

Total withdrawals not including salt water.....62,326,156 cu. ft.
Total water volume that has moved into the reservoir..11,109,831 bbls.
Water volume that moved into reservoir during May.. 233,619 bbls.
Total water level movement: $\frac{62,326,156}{21,780,000 \times .16} = 17.89$ feet
May water level movement: $\frac{1,310,603}{21,780,000 \times .16} = 3.76$ feet or 3.13 inches

If it is assumed that all excess gas produced has come from solution and will return to the gas cap when injected into the reservoir, the following data have been prepared:

Total withdrawals not including salt water.....62,326,156 cu. ft.
Total water volume that has moved into the reservoir.. 8,395,051 bbls.
Water volume that moved into reservoir during May.. 113,974 bbls.
Total water level movement: $\frac{47,096,240}{21,780,000 \times .16} = 13.31$ feet
May water level movement: $\frac{639,393}{21,780,000 \times .16} = 1.83$ feet or 1.52 inches

As the bottom-hole pressure has been maintained within 93 percent of that at the start, it is reasonable to assume that the flank water will be held in check, and that fingering will be prevented. Since the wells have continued to flow since they were drilled, the field should have a high per acre yield of oil without excessive water production. If the water is held back and allowed to enter the reservoir gradually, the final result may be only a minimum amount of oil left in the sand.

When the pool was unitized, the management of the gasoline plant and repressuring unit was given to Continental Oil Company. The farm numbers of the wells were changed when the unit was formed and given a unit number running consecutively from 1 to 70 so that directions could be given with as little possibility of error as obtainable.

The repressuring plant is tied into and operated with the gasoline plant, which is designed to receive the gas from field oil and gas separators at a pressure ranging from atmospheric to 10 inches, mercury vacuum. Nine 225 horsepower twin, horizontal gas engine driven compressors are installed in the gasoline plant side of the unit, which are equipped with a high and low compression cylinder to boost the gas in two stages from the intake pressure to a final pressure of 300 pounds, gauge. Gasoline is produced from the gas at the outlet of both sections of cooling facilities, but the final stripping of the raw gas is accomplished in a high pressure absorber operating at 300 pounds, gauge, with absorption oil flowing counter current to the stream of gas under pressure. The gas is cooled in interstage and at 300 pounds by atmospheric sections located in an induced down draft cooling tower developed to minimize wind losses of cooling water.

The residue gas leaving the absorber is piped to a header from which it is divided into the systems requiring fuel. Part of the gas is returned to the field for operating the various units, and for drilling additional wells—there being two drilling as of June 1, 1940. The fuel header carrying gas for the gasoline plant engines and the pressure maintenance unit, together with fuel for the plant boilers is beside the field header, and another header receives gas from the absorber outlet which is piped, after metering, to the unit compressing the gas for injection back into the Wilcox sand.

The equipment installed to compress the gas from 300 pounds—the pressure on the residue gas system—consists of an angle type machine with four vertical power cylinders and four horizontal compressor cylinders. It is housed in a building at the end of the gasoline plant engine room, but near enough that the operator of one can take care of both conveniently. The cylinders on this engine are divided into two sizes, one for boosting the gas from 300 pounds, gauge to 700 pounds which is passed through cooling coils before it enters the second group of cylinders. In these cylinders, the gas is compressed to 1400 pounds, gauge, and enters the main header for distribution to field for injection into the input, or those which sometimes are called key wells. Cooling is not applied to the high pressure gas, and it starts to the field at the compression temperature at the outlet of the cylinder header.

The high pressure field lines consist of both 3 and 2 inch seamless pipe which is welded instead of being fitted with threads and collars. The difference in temperature between the discharge of the high stage cylinders and the point of injection is sometimes quite large, particularly during winter months, changing from day to day, depending upon the atmospheric temperature. With these varied changes, pipe line creep by expansion and contraction, is compensated for with large vertical loops, placed at intervals of about 1000 feet throughout the field. At the point of the pipe line where the loop is to be made, a concrete trough, or box, is poured with the rim somewhat higher than the surface of the ground, and recessed so that a steel grating can be placed over the open top. Short sections of the grating are placed around each side of the loop, resting on the larger pieces so that, when the pipe contracts and expands, the shorter section slides to and fro but the pit opening is always closed. Therefore, cattle and other domestic animals are prevented from being injured, which might occur if they should step in an open hole of the size required for building and maintaining the vertical loop. At the center of the loop, clamps are placed with connections for a wire line, which is attached to a turnbuckle that in turn is fastened securely to an anchor post in the ground on each side.

Several wells have been tested out to determine if they would be good key wells, and seven altogether have been connected to the repressuring system. At the present time only three wells in the total of 69 are being used for injection. These wells were neither shot or especially equipped at the bottom of the hole to take the injected gas. The only change made to take them off production and put them on input service was to lay the pressure line to one side of the casing head of the Christmas tree and close all other openings, either by shutting the gates and lubricated stops or by plugging the openings. The loop, or meter run at the well is an extension of the supply line and rises from the ground with easy bends to about 18 inches above the surface where it is supported on posts made of pipe set in a concrete grout. The first piece of equipment on this line is an adjustable valve, similar to an above ground choke on a flowing well to regulate the amount of gas to be injected into the particular well. Next comes the recording orifice meter having connections on the flange with the instrument supporting post clamped to the line with a leveling saddle. Bolted flanges in the line are placed where it is necessary together with a check valve.

Here's a CASH SAVING
between standpipe and swivel!
HEWITT
MULTIPLE-LENGTH
ROTARY HOSE
Pioneering for the driller's profit, HEWITT offers exclusively a Multiple-Length Rotary Hose that's already establishing economy and speed records. And for good reasons . . . Instead of the conventional 50 to 60 foot length of hose, all of which must be replaced in the event of failure due to accident or normal wear, HEWITT Multiple-Length Hose is made up of two short equal lengths joined by extra strength built-in couplings that are leak-proof and full-flow. Just one of these half-length pieces is all you need for standby inventory or replacement—and this cuts your cost in half! It does more than that. It makes for easier handling—helps to prevent whip—and lengthens service life . . . This Multiple-Length improvement is a bonus added to features that have made HEWITT Rotary Hose a favorite of drillers and tool pushers alike. They're all HEWITT features—high tensile rubber and synthetic oil-proof compounds, extreme flexibility, and generous margins of strength to stand the highest pressures. Ask your HEWITT distributor for detailed facts.
HEWITT RUBBER CORPORATION • BUFFALO, N. Y.
HEWITT Distributors are listed in Classified Telephone Directories under "Rubber Goods" or "Belting"
YOUR STANDBY INVENTORY AND REPLACEMENT COSTS
cut in half!
OSE • CONVEYOR AND TRANSMISSION BELTS • PACKIN

Time is money . . . Save it by using Ideal Power-Driven Slush Pumps . .

These pumps provide the sustained high pressure circulation required for rapid drilling—power ends of large size with heavy crank shafts in well-spaced bearings assure continuous operation at capacity—lubrication is simple and effective—mud is positively excluded from the power end—operation is smoother with less vibration and hose whip, and delivered volume is greater because these pumps are designed to operate at higher speeds—upkeep is low. For additional details on Ideal Power Slush Pump performance see your nearest National representative.

BRIEF SPECIFICATIONS							
MODEL No.	MAXIMUM LINER SIZE	STROKE	MAXIMUM WORKING PRESSURE	PRESSURE RATING OF FULL-SIZE LINER	RATED SPEED	RATED HORSEPOWER	WEIGHT POUNDS
C-100	6¼"	10	1,500	520	65	100	11,100
C-150	6¾"	12	2,000	555	65	150	17,000
C-250	7¼"	15	2,500	710	60	250	28,975
C-350	7¾"	18	3,000	800	55	350	36,400

DOMESTIC

EXECUTIVE OFFICES
PITTSBURGH, PENNA.

•

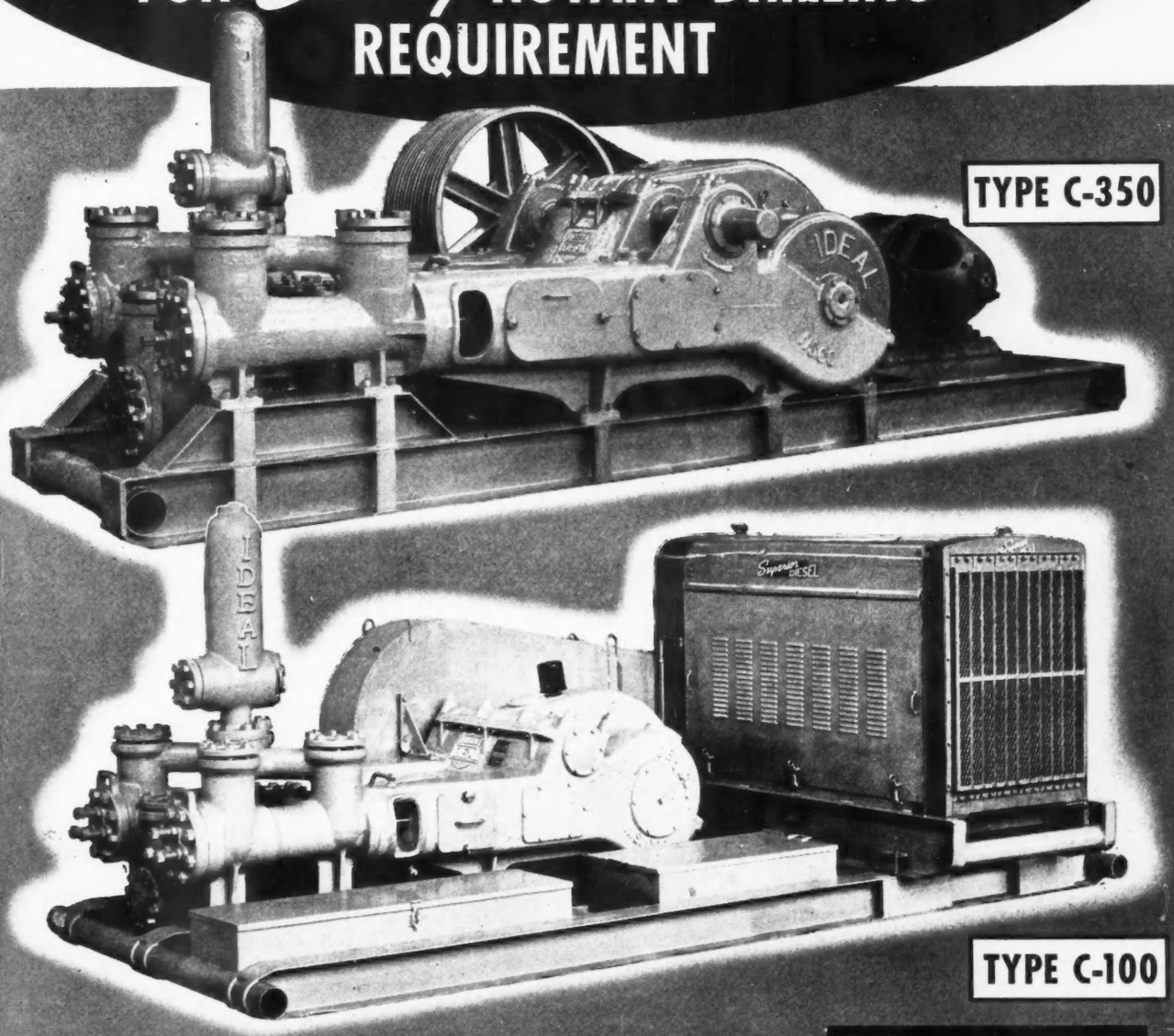
GENERAL SALES OFFICE
TOLEDO, OHIO

•

DIVISION OFFICES
FT. WORTH, TEX. • TULSA, OKLA.
TORRANCE, CALIF.

THE NATIONAL

THERE IS AN IDEAL POWER DRIVEN SLUSH PUMP FOR *Every* ROTARY DRILLING REQUIREMENT



TYPE C-350

TYPE C-100

EXPORT

THE NATIONAL SUPPLY CORPORATION
30 ROCKEFELLER PLAZA
NEW YORK, N. Y. . . . U. S. A.

•

RIVER PLATE HOUSE
12 SO. PLACE, LONDON, E. C. 2
LIMITED LIABILITY

•

PLOESTI, ROUMANIA

•

MARACAIBO, VENEZUELA

IONAL SUPPLY COMPANY

Distillate Fields Bring New Production Phase

By BRAD MILLS, Associate Editor

ONE of the most interesting current oil field practice developments has been the introduction and widespread adoption of recycling plants for high-pressure distillate-producing fields. Preceding installments have told of the necessity for such plants, if gas waste is to be avoided and if reservoir pressure is to be maintained sufficiently to prevent loss of recoverable contents in such reservoirs; and have described some of the typical recycling plants. The present article, the fifth and concluding chapter of the series, continues the discussion of absorption type plants.

Recycling
PART V

THIS article is the fifth and concluding installment of a series on recycling operations, and continues the discussion of absorption type distillate plants that was commenced last week. Other chapters have described, pictorially and in words, other types of typical plants. The purpose of the material has been to present a bird's-eye view of some of the typical recycling plants being constructed.

Lockhart Oil Company

Lockhart Oil Company's recycling plant in the Agua Dulce field is one of the most modern installations employing the absorption process for recovery of the distillate. The plant normally handles 25 million cubic feet of wet gas daily from a sand encountered at 4800 feet, and all dry gas is injected into the same formation. Distillate recovery has been higher per thousand feet processed than the average for all plants in the area.

Gas is produced from 10 wells, and 4 input wells are used. The larger proportion of injection wells works to advantage in maintaining a nominal input pressure. Gas production ranges from under 2 million to 9 million feet per well daily.

Incoming gas is first passed through scrubbers, where more more than a third of the total plant recovery is obtained. The high recovery at this point is possible because the scrubber is the first trapping point in the system. The tendency toward condensation is marked from the time the gas leaves the formation, and any condensate being swept along in the lines is easily recovered at the scrubbers. The gas passes from the scrubber through coolers, the temperature during the process being reduced from 105° F. to about 69° F. by the circulation of chilled water in the coolers.

The cooled gas goes to the main absorber at a pressure of 1200 pounds, the dry gas passing to the compressors at about the same pressure. Both distillate from the scrubbers and fat oil from main absorber passes to a flash or cold oil vent tank operating at a pressure of 260 pounds. Gas flashed from this tank is sent to a reabsorber for final conditioning for plant fuel. Distillate and fat oil from the reabsorber and cold-oil flash tank passes through the oil-to-oil heat exchangers to the hot-oil flash or vent tank at a temperature of 285° F. Vapors from this flash tank are cooled and sent to the reabsorber. The fat oil passes through the pre-heater and the temperature is raised almost to the full still temperature in the process. The flow is then to the still, operating at a temperature of about 375° F. and a pressure of 42 pounds.

The lean oil leaving the still bottom is passed through oil-to-oil heat exchangers, through the cooling tower, and finally to the lean-oil surge tank for recirculation through the absorbers. Still vapors are sent to the gasoline condensers and to the gasoline surge tank, principally as gasoline. Non-condensable vapors are taken from the gasoline surge tank to the recompressor, via a scrubber, and sent to the stabilizer. Gasoline is pumped from the surge tank to the stabilizer, then passes from the stabilizer, through a reboiler and cooler to storage. Vapors from the reboiler are sent back to the bottom of the stabilizer. Vapors from the top of the stabilizer are condensed, sent to the reflux tank primarily as gasoline, then pumped back to the top of the stabilizer. Vapors from the reflux tank are piped off.

A small oil-conditioning still is operated in connection with the primary still. This reclaiming unit operates at a slightly higher pressure than the main still. Agitation steam that ordinarily would enter the primary still is passed into this small unit for reclaiming or evaporating the light fractions of the oil. This steam, with its entrained oil vapors, passes into the main still and functions normally as a stripping medium. Capacity of the purifying unit is only a fraction of the total handled in the primary circuit. The purifier picks up a small part of the total oil circulated by means of liquid-level controller. Oil taken off for conditioning leaves the main circuit

BIG VALUE

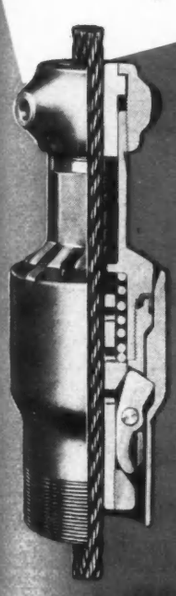
for Small Money!

BAASH-ROSS Safe, **MODERN**, Production Tools

BAASH-ROSS WIRE LINE WIPER

BAASH-ROSS Streamline TUBING BLOCK

BAASH-ROSS TUBING SPIDER



FOR YOUR CONVENIENCE, THE *COMPLETE* BAASH-ROSS **52 PAGE** CATALOG IS INCLUDED IN YOUR

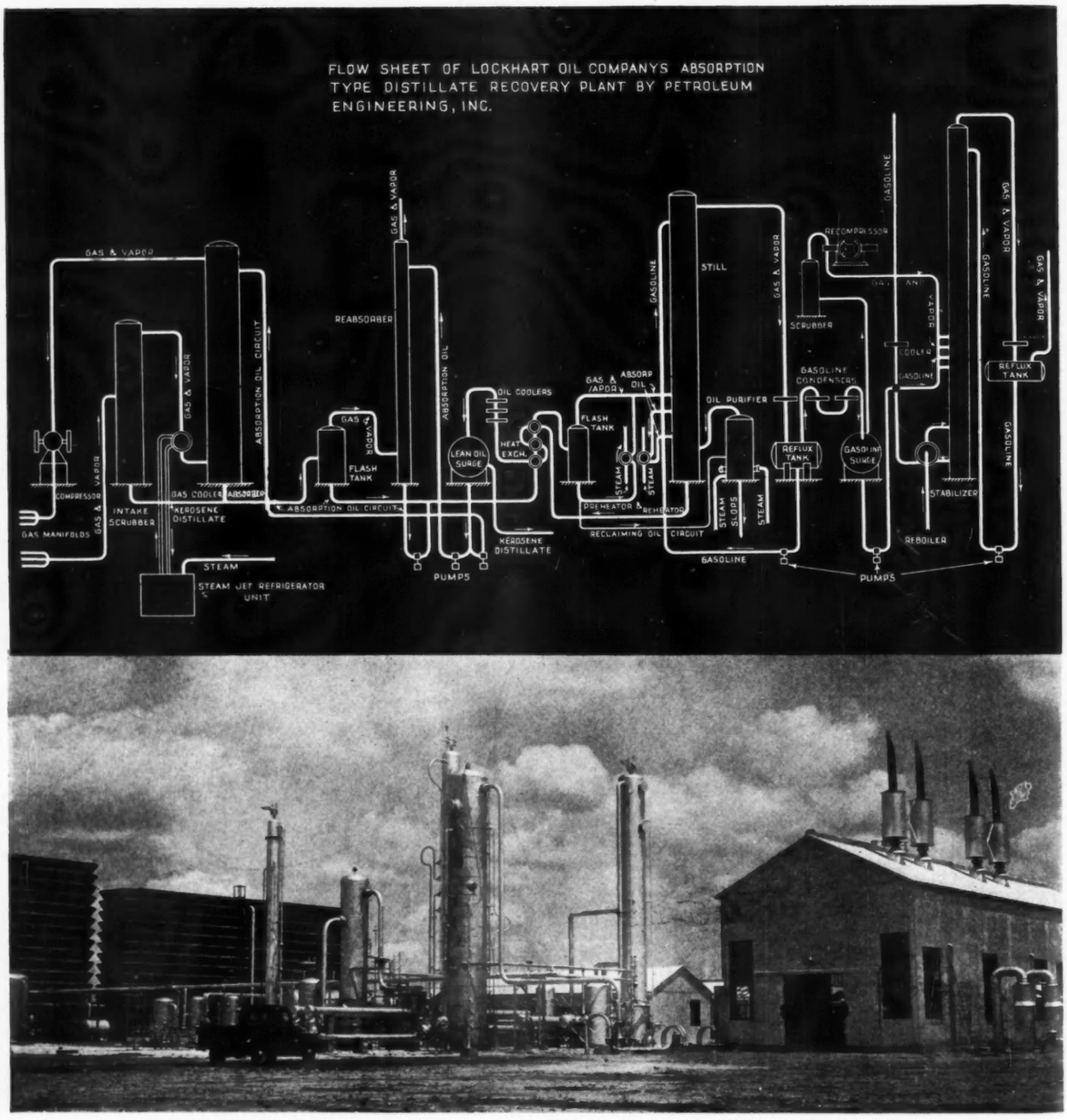
1940

BAASH ROSS
TOOL COMPANY
OIL WELL TOOLS · SPECIALTIES
LOS ANGELES
HOUSTON · NEW YORK

COMPOSITE CATALOG

Lockhart Oil Company

Agua Dulce Field, Texas, Recycling Plant



The scrubber, absorber, still and stabilizer are shown in this general plant view, with compressor house on the right. Operating pressure of the absorber is 1200 pounds. A feature of this plant is high recovery of fluid from wet gas. The scrubbers extract a high percentage of the condensate ahead of absorption.

after it has passed through the hot-oil vent or flash tank, being under adequate pressure for entry into the purifying unit.

A steam-jet refrigerator unit employs exhaust steam to chill water used in the cooling unit, where temperature of the wet gas is reduced to 69° F. before passing to the absorber. This unit affords several advantages, in addition to saving water that otherwise would need to be treated. The exhaust steam is condensed as the chilling water is cooled, and the arrangement also reduces use of the cooling tower.

The plant was designed to make

9 Years in the Oil Industry...

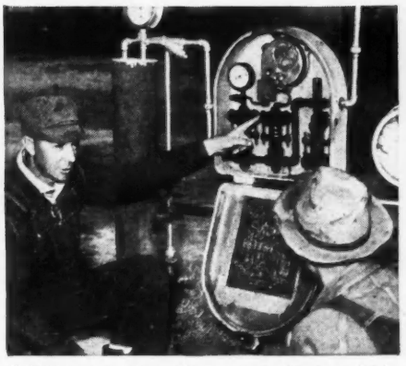
And NEOPRENE'S Job is Still GROWING!

(1) Rugged Neoprene cups are used throughout this Valve-in-Head Packer. They do an effective sealing job against oil and mud even under tremendous pressure.

NEOPRENE first went to work in the oil industry nine years ago. Since then, the amount of neoprene used by the industry has increased tremendously. Nowadays you'll find this remarkable chemical rubber serving all the great oil-producing fields . . . at the vital points of more tools and equipment than ever before. Why? Because neoprene's value has been tested by time . . . proved by continuous grueling use.

Neoprene has all the strength, resiliency and toughness of natural rubber —*plus* resistance to oil, heat, gasoline, oxidation, sunlight, aging and corrosive acids and gases. For better and longer service, specify neoprene. You'll make money on increased efficiency . . . you'll save on lowered overhead. Du Pont, Rubber Chemicals Division, Wilmington, Delaware.

(2) Neoprene pistons and valve inserts are essential to the operation of this Vertical Pump. These neoprene parts are in constant contact with corroding acids and oil.



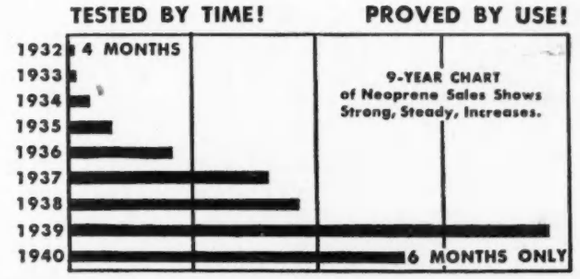
(3) Neoprene protects every vital point of this Gas Lift System. In spite of sulphur gas, high pressures and oil, these neoprene elements keep their strength and resiliency.

(4) 41 neoprene parts serve this Gun Perforator. To do their job, they must withstand shock, oil, heat, and excessive pressure.

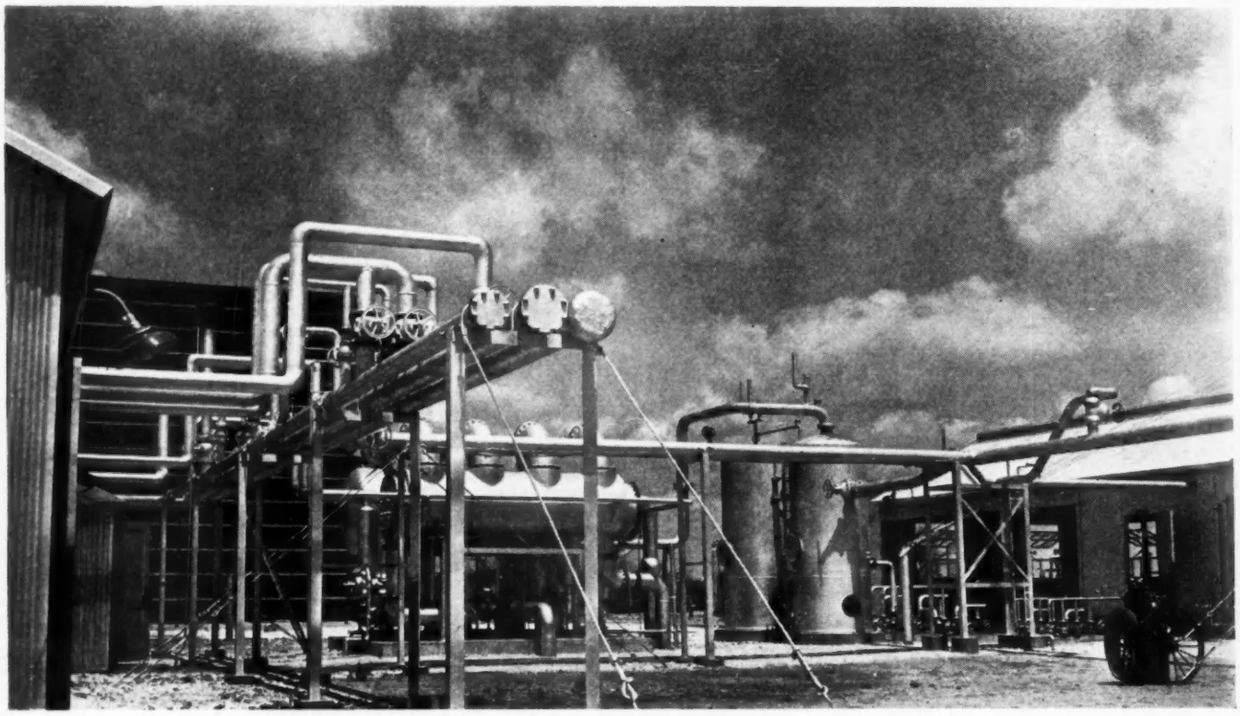
The Petroleum Industry uses **NEOPRENE** *for:*

Bearings	Laboratory equipment
Belts	Linings, tank and pipe
Cables, electrical	Oil savers
Christmas tree seals	Packers, all types
Clothing	Packing elements
Diaphragms, plain and cloth inserted	Pistons, all types
Footwear, soles, heels, boots	Paint
Gaskets, plain and cloth inserted	Seals, all types
Hose, of all types	Slush pump valve rubber
	Tubing head strippers
	Valve seats, inserts, seals

SEE OUR EXHIBIT AT NATIONAL METAL EXPOSITION, CLEVELAND, OCT. 21-25



DU PONT
NEOPRENE
the chemical rubber



A steam jet refrigeration unit utilizes exhaust steam to cool the water used in the chilling unit. Part of the refrigeration unit is shown here.

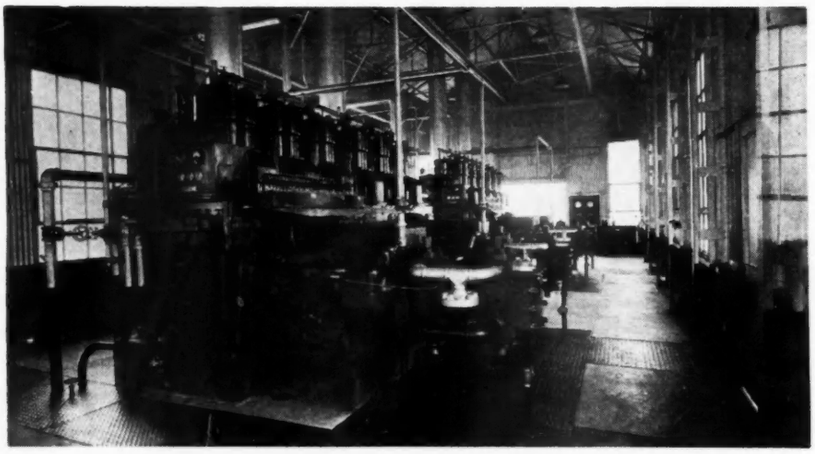
finished products of various specifications, but a good grade of gasoline is most desirable. Principal products have been a stable motor fuel and a liberal cut of kerosene distillate (absorption oil). The gasoline has an octane number between 64 and 68 and is highly susceptible to lead treatment. The plant also is equipped for making butane, and enough of this product is being manufactured to meet needs. Plant design has proven efficient, charcoal test of the dry gas from the absorber showing only a trace of condensate. When 25 million feet of gas is handled, distillate recovery is around 30,000 gallons daily.

Two 600-horsepower angle-type compressors are used for increasing the pressure of the dry gas from 1200 to 2050 pounds. Steam is liberally used around the plant, four 125-horsepower locomotive-type boilers furnishing this power. Automatic controls are used on water level and steam pressure lines. Six duplex steam pumps are used in the recovery plant, three for circulating absorption oil, and three for handling the gasoline between the still and storage.

A modern laboratory is maintained. Recording and control instruments are located in the process pump house, a building constructed with one side open to meet climatic conditions in summer. The plant is equipped with an emergency shut-down system, liquid-level controller on the intake scrubber, and pressure-relief valves in all vital lines and vessels.

The main field gathering system consists of 6-inch lines, with 4-inch laterals to individual wells. Lines to injection wells are 5- and 6-inch high-pressure combination, equipped with double-offset expansion loops. Well-head equipment at producing and injection wells are alike.

Injection wells were completed for maximum exposure of the producing zone to the returned gas. Well friction is nominal, the input pressure not being greatly above the formation pressure. Pressure held on lines from producing wells is about 1450 pounds, the injection pressure under 2100 pounds.



These two 600-horsepower compressors can handle more than 25 million feet of gas daily, with 1200-pound intake pressure and 2200-pound discharge.

Agua Dulce Corporation

Agua Dulce Corporation's recycling plant in the Agua Dulce field, Nueces County, Texas, pioneered the way for high-pressure absorption in distillate recovery. Use of low-cold-test absorption oil, a closed absorption-oil circulating

BAROID-AQUAGEL MUDS MINIMIZE DRILLING DIFFICULTIES

Baroid Service Engineer running tests on mud at a well

id Service Engineer making mud recommendations to driller

When moderately high mud weights are needed, if a native mud is used, it is generally necessary to work close to the upper limit of viscosity; on the other hand, when the same weight mud is attained by means of a BAROID-AQUAGEL mud, it is possible to work at as low a viscosity as the operator desires. Consequently, mud making formations which tend to increase viscosity, can be drilled through, when using BAROID-AQUAGEL mud, with minimum difficulty from thickened mud.

Moreover, AQUAGEL, being highly colloidal, is much more reactive to chemical deflocculation, thus allowing the mud to be maintained in a satisfactory condition, by chemical treatment alone, over a long period of drilling.

Drilling muds, properly selected and controlled, assure faster, safer, more economical drilling. Baroid Service Engineers with laboratory equipped cars, are available in or near all active oil fields to help with your mud problems.

AROID PRODUCTS

OID and COLOX–Extra Heavy Drilling Muds. • AQUAGEL–Trouble- Colloidal Drilling Mud. • STABILITE–An Improved Chemical Mud er. • BAROCO–An Economical, Salt Water-Resisting Drilling Clay. OTEX–For Preventing or Regaining Lost Circulation. • AQUAGEL EMENT–For Setting Casing and Restoring Lost Circulation. ENTOX–For Reconditioning Cement-Cut Muds. • ZEOGEL–Special to be Used as a Suspending Agent When Salt or Salt Water is ntered. • TESTING EQUIPMENT–For Drilling Mud Analysis and ol. BAROID WELL-LOGGING SERVICE—Formation Information gh Mud Analysis.

BAROID SALES DIVISION
National Lead Company

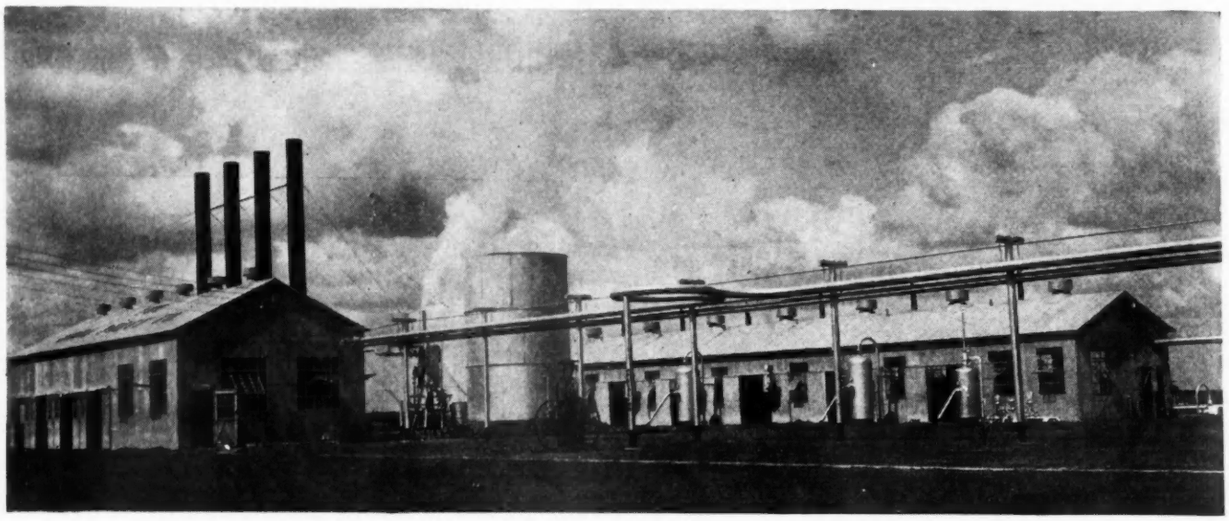
NEW ORLEANS OFFICES, INC. ORPEISS . TULSA . HOUSTON

BAROID OIL WELL DRILLING MUD SERVICE

Baroid Products and Servi Engineers are available in c active oil fields of the U S

Agua Dulce Corporation

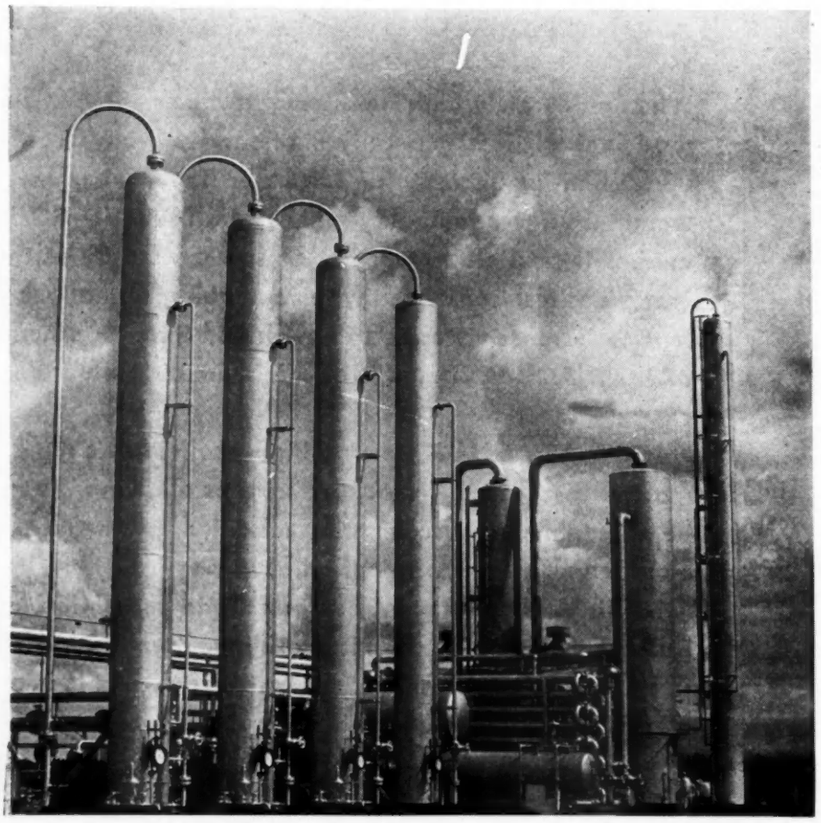
Agua Dulce Field, Texas, Recycling Plant



Location of the boiler house and compressor plant show the generous spacing used throughout the plant. Six 300 horsepower compressors are used.

system, and stabilizing equipment have proved effective in handling wet gas from two zones. The plant is handling about 50 million feet daily but has a capacity of 60 million feet.

Well-head pressure varies from 1650 to 1900 pounds. Gas is being produced from 10 wells and injected into 5 wells. Original production was from a sand encountered at 4800 feet, but a deeper producing zone has been opened.



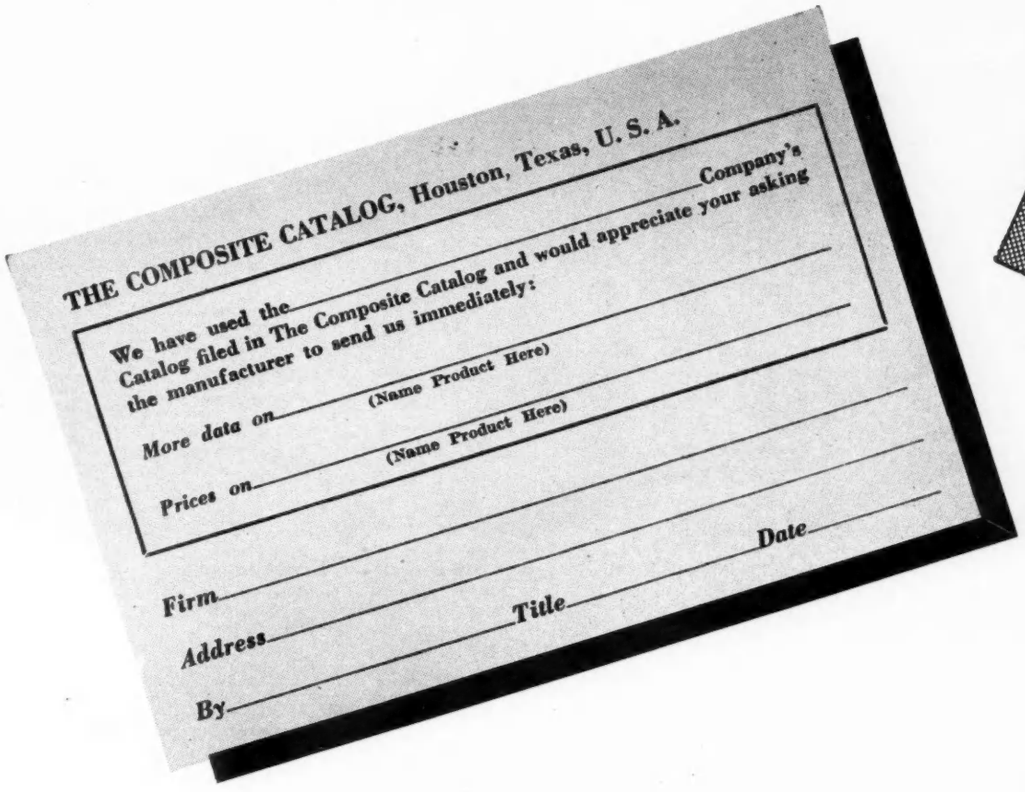
This view shows the three 1250-pound absorbers and, on the left, the reabsorber. Distillation and stabilizing equipment is shown in the background.

Three Absorbers in Parallel

Field gas comes to the absorbers at 1250 pounds and about 92° F. The three absorbers operate in parallel and each can handle up to 20 million feet daily. The manifold hook-up is such that 1, 2 or 3 absorbers may be used. Each absorber is 38 x 3 feet (I.D.) and has a wall thickness of 2 inches. No separation of liquids occurs ahead of the absorbers.

Absorption oil used has an A.P.I. gravity of 32° to 33°, initial boiling point of 420° to 430° F., and end point around 650° F. Boiling point of the absorption oil is considerably above the end point of the condensate recovered from the wet gas. Rate of oil circulation is varied with temperature of the gas, ranging from 2 to 4 gallons when handling gas from 88° F. to 100° F. Use of a closed system obviates use of a lean-oil accumulation tank. Oil loss is small, since distillation efficiency is high and oil entrain-

USE THE BLUE CARD


THE COMPOSITE CATALOG, Houston, Texas, U. S. A.
We have used the Company's Catalog filed in The Composite Catalog and would appreciate your asking the manufacturer to send us immediately:
More data on (Name Product Here)
Prices on (Name Product Here)
Firm
Address
Title
Date
By

FOR YOUR CONVENIENCE....

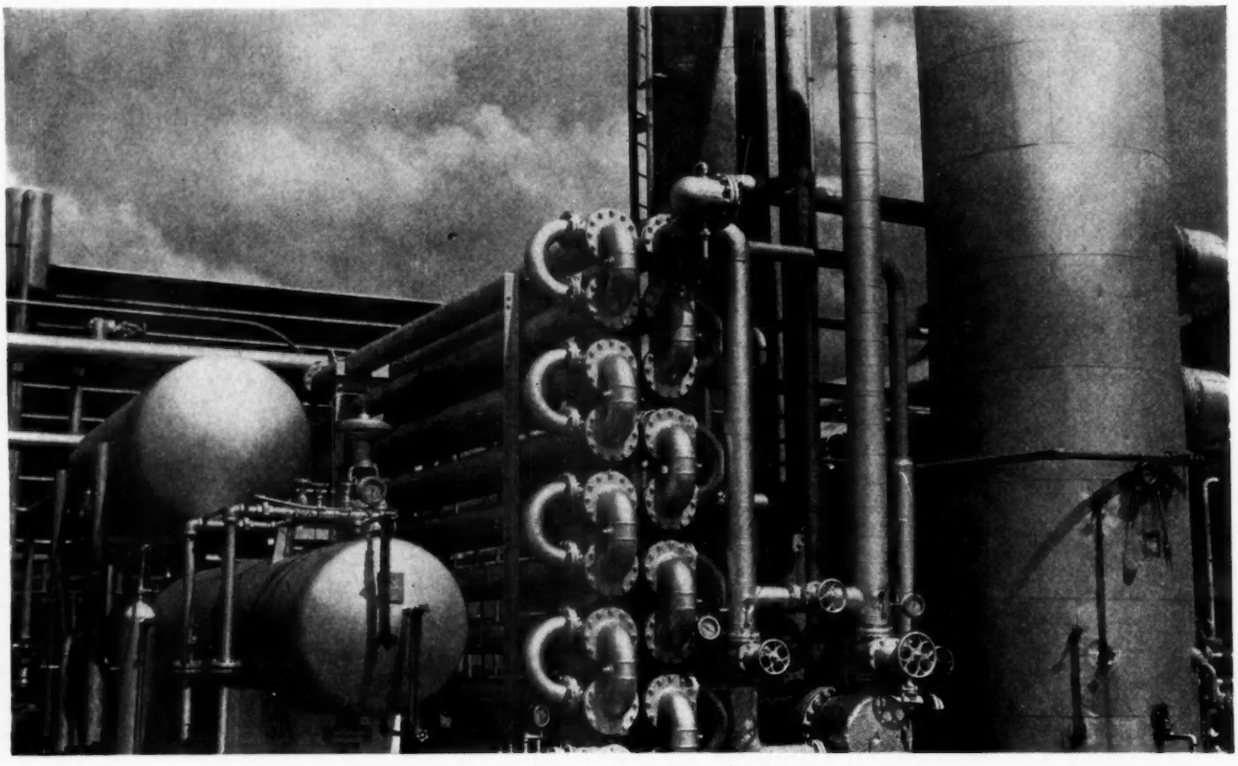
A supply of these blue, self-addressed, U. S. postage prepaid cards are inserted just following the Classified Index of your copy of The Composite Catalog.

If you fail to find **all** the data you need on any piece of equipment, whether described in The Composite Catalog or not described therein, just fill out a blue card and drop it in the mail. The data requested will be sent promptly.

A Time Saver . . . **Wherever Oil Is Produced**

THE COMPOSITE CATALOG

. . . Number One Reference on Equipment



A close-up of the heat exchangers is shown, with the base of the evaporator and dephlegmator showing at right.

ment with the residue gas from the absorbers is negligible. The amount of oil added from time to time is small. An 18 x 5 x 18 duplex pump is used for charging the oil to the absorbers, suction being taken from a turbine-driven centrifugal pump.

A vent system is used for reducing pressure of the fat oil leaving the absorbers, but the pressure retained is adequate for sending the oil through the distillation unit. In addition to natural gasolines, the plant produces U. S. motor fuel and kerosene. The motor fuel is a 9.6-pound test product, an initial boiling point of about 100° F., end point of 392° F., and 64-66 octane number. It is highly susceptible to lead. Gas produced from the deeper zone yields a good percentage of kerosene and more heavier fractions than are found in the shallower gas.

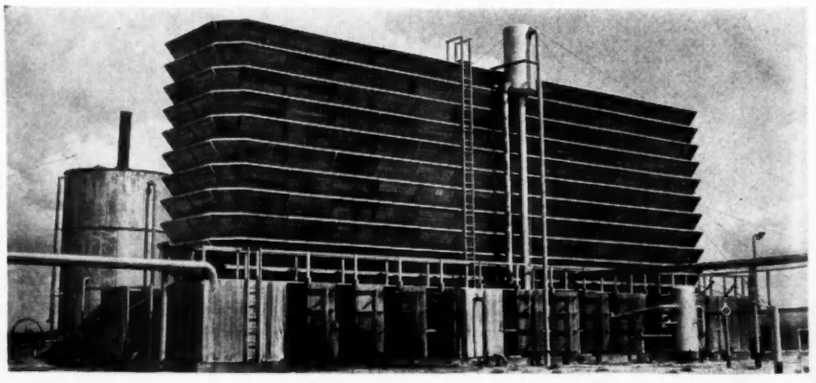
The still is equipped with separate dephlegmator and a side stripper. Eight bubble plates are provided for specification withdrawal. Still temperature is just under 400° F. during manufacture of motor fuel. Superheated steam is passed through two elements, then the steam at remaining temperature is used in turbines and pumps. The exhaust steam is largely reheated with superheated steam at full pressure, for still processing.

A closed condensate and steam system is employed, as good water is scarce. All spent steam goes to the condensate-recovery plant. Boiler-feed water is heated to a temperature above 300° F.

Four 125-horsepower, 300-pound working pressure boilers are used, each equipped with superheater. Boiler fuel is supplied by vent gas from the rich oil surge tank and raw make tank. This vent gas is passed through a tail absorber for removal of desirable fractions.

Six 8-cylinder, 300-horsepower compressors are used, each having two 3⅞ x 12 compressor cylinders and 11½-inch power cylinders. For convenience two compressors are connected to each absorber, the present pick-up of dry gas being above 1200 pounds and the discharge pressure about 2250 pounds.

Gas in and out of the plant passes through a central manifold battery, where it is metered by orifice meters.



Water for plant use is jetted or gas-lifted. The tank at the top of the cooling tower is the gas-recovery vessel, this tank simply being attached to the top of the casing on the water well. The gas is recovered and used, while the water goes direct to the top of the cooling tower.

A NEW DEFENSE

against corrosion fatigue, pitting and embrittlement

The new

Bethlehem offers a new sucker rod with greatly improved performance for the tough wells with the heaviest pumping duty in highly corrosive fluids.

Bethlehem X-1 Sucker Rods have been thoroughly tested under severe conditions of corrosion fatigue and embrittlement. They have given remarkable performances in some of the notoriously tough wells in the Mid-Continent field, notably in Smackover and El Dorado, Kansas.

The Bethlehem X-1 Sucker Rod is fully normalized, and is made of a balanced alloy which provides desirable physical properties without drastic heat treatment. This means that the steel has enhanced resistance to the destructive action of complex alternating stresses and corrosive fluids.

Steel in the X-1 rods has a tensile strength of 100,000 p.s.i. and an exceptionally high ratio of yield point to tensile strength obtained without sacrifice of ductility. This assures rods that have excellent working characteristics. In addition, X-1 rods have good resistance to shock, fatigue and wear.

Typical physical properties—Bethlehem X-1 Sucker Rods

Yield point	75,000 p.s.i.
Tensile strength	100,000 p.s.i.
Elongation in 2 in.	35%
Reduction of area	60%
Brinell hardness	207

Other sucker rods available

Other Bethlehem Sucker Rods are the X-Mayari, for heavy pumping in corrosive wells, and the XX Copper-bearing Sucker Rods, for medium pumping duty in moderately corrosive wells.

BETHLEHEM STEEL COMPANY

BETHLEHEM STEEL

DRILLING CONTRACTORS' NOTEBOOK

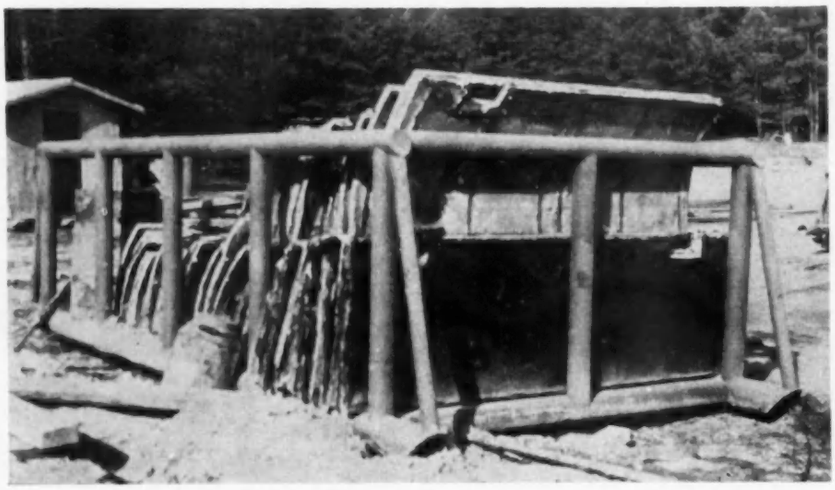
Helpful Suggestions For Those Interested In Drilling Methods

Operating Ideas Maintenance Hints New Rig Hook-ups

Published as a regular feature of THE OIL WEEKLY

1. TRANSPORTATION

Rack Made of Pipe Protects Sheet Boiler Insulation While Moving



This rack, which slides onto the bed of a truck, protects boiler insulation in transit.

WHEN drilling-boiler insulation is made in sections for applying and removing a rack of pipe may be used to protect the sections when trucking from one location to another. The rack may be made to slide onto the bed of a truck, with the lower side floored with light tank steel so the edges of the insulation will not become broken in transit.

2. ENGINE COOLING

Drum Provides Extra Water Supply

Oil drum mounted on part of another provides extra supply of cooling water.

AN oil drum may be used for a auxiliary supply of engine cooling water. Such a reservoir is of particular value in the Southwest where engines frequently require a larger amount of cooling water than in other parts of the country.

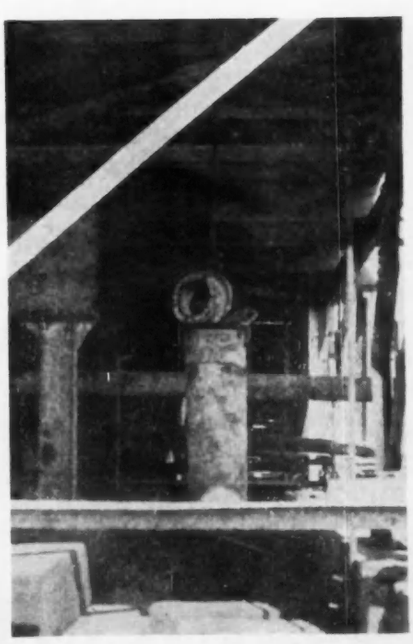
A pumping engine may be equipped by welding a drum to the half of another, serving as a skirt to raise the reservoir sufficiently high for thermo-syphon circulation. In conversion, the opening in the water pot above the jacket on the engine was closed by brazing a cover. A 1¼-inch nipple was welded in the water pot to connect as an outlet to the side of the oil drum, and a second nipple was placed in the jacket side near the head for the lower water inlet from the drum.

The 50 gallons or more of water so provided furnished adequate cooling as the engine ran continuously on shallow wells.

3. RIGGING UP

Tong Counterweights Set Below Floor

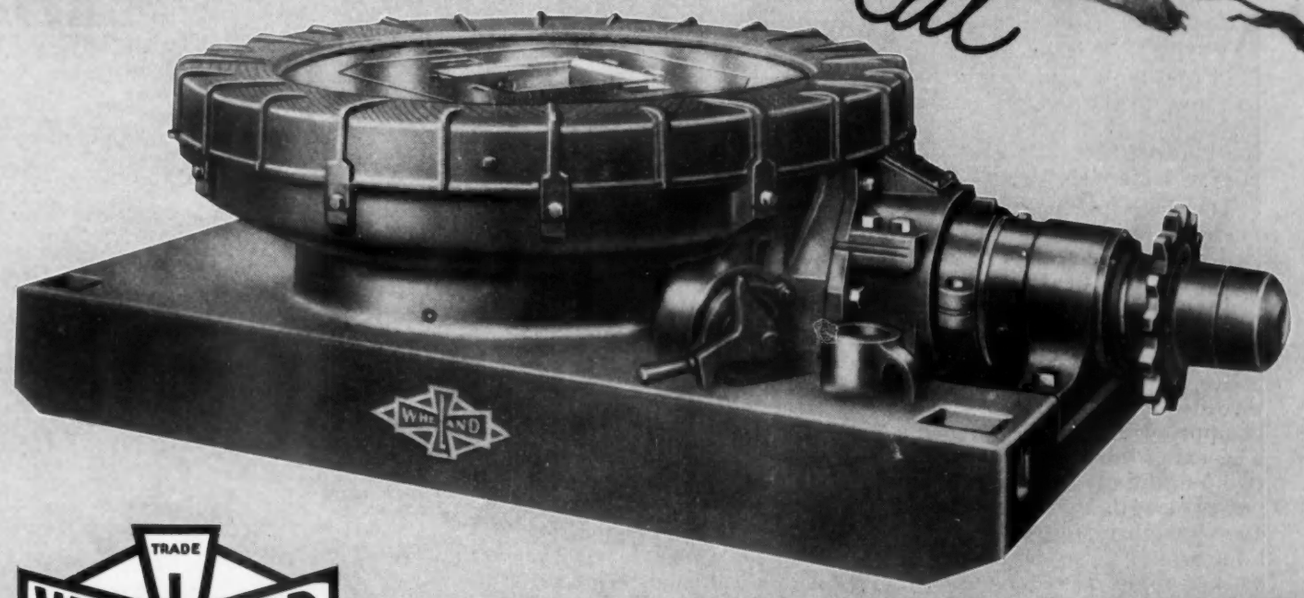
PIPE tong counterweights may be placed out of the way under the derrick floor by running the wire line by which they are suspended through a hole in the floor planking. A sheave or snatch block attached to a joint of pipe on a girt below the threble board will pro-



Pipe-tong counterweight, rigged under derrick floor, is out of the worker's way.

Strong as an Elephant

Quick as a Cat



TRADE WHELAND MARK

It's WHELAND-LUCEY
Precision Built

Strength and speed are only two attributes of the Wheland-Lucey A-18000-A Rotary. It does its work quickly and with complete safety. It has the power which its specifications and construction are designed to provide, yet it has ability, flexibility and quick response.

Its One Piece Cast Steel Base supports the rugged design. Its machine cut, heat treated tool steel main gear is shrunk on. The tool steel Pinion is machine cut and heat treated, and may be adjusted horizontally while Rotary is running, thereby reducing gear noise to a minimum. Coil spring arrangement provides even tension; prevents loss of lubrication and eliminates possibility of entrance of foreign matter from below. There are separate Oil Reservoirs for Main Load Bearing, Gear and Pinion Shaft Bearings, so that each may be supplied with proper grade lubricant.

Write for Special Bulletin

DISTRIBUTORS:

Lucey Products Corporation
Tulsa, Oklahoma

Houston Oil Field Material Co., Inc.
Houston, Texas

Murray-Brooks Hardware Co., Ltd.
Lake Charles, Louisiana

Frick-Reid Supply Corporation
Tulsa, Oklahoma

EXPORT:

Lucey Export Corporation
3505 Woolworth Bldg., New York, N. Y.

Broad Street House, London
E. C. 2, England

THE WHELAND COMPANY

ROTARY DRILLING EQUIPMENT

Chattanooga, Tenn.

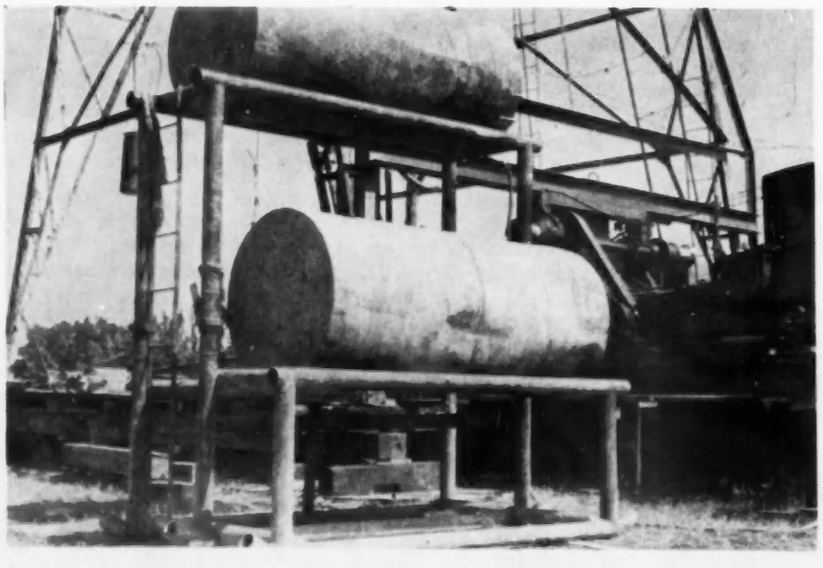
vide sufficient swing to move the tongs to the drill pipe, and the space usually occupied by the counterweight on the derrick floor may be used for other objects.

4. FUEL SUPPLY

Adjustable Rack for Fuel Tanks

WHERE it is necessary to install fuel tanks at a height to permit flow to the pumps by gravity, an adjustable rack may be made for two or three tanks, as the necessity demands.

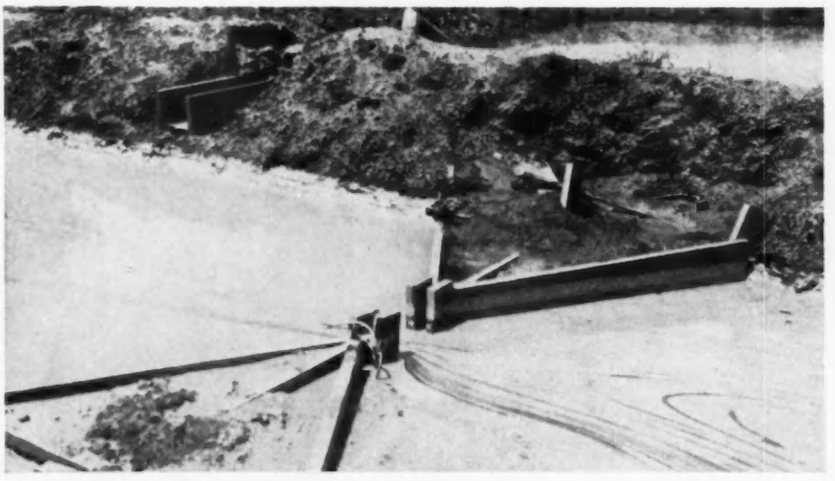
The base of the rack may be made of 4-inch pipe, tipped for sled-runner effect, with three risers of 4-inch pipe at each end. The first bed for the tanks may be set at the usual height, but two of the three risers at each end are extended above the supporting rails with threaded ends. Each end should be equipped with half of a lip union. The extension may be made with two lengths of 4-inch pipe of convenient length, to which are welded cross members for supporting the tank which is to be raised. The ends of these risers have the other halves of the lip unions attached to permit the extension to be attached or dismounted quickly.



One gravity-flow and two storage fuel tanks are accommodated on adjustable rack.

5. MUD HANDLING

Baffles Inserted in Mud Pit Retard Flow to Aid Settling of Solids



Baffles made of lumber retard mud flow and permit heavy particles to settle out.

BAFFLES made of lumber and inserted in the mud pit may be used to retard the flow of mud from the shale shaker to the mud pump suction so that heaving particles will settle to the bottom.

Two similar sections, both in the form of a wedge, may be set in the pit in a manner to restrict the mud flow through a narrow channel. The baffles should extend at least 10 inches above the mud level. Brackets at the protruding ends of the baffles permit insertion of a wood block to govern the height of the mud in the pit upstream from the baffle.

6. TRANSPORTATION

Skid and Spool Aids Hose Handling

A SKID-TYPE base with a circular steel spool provides a convenient method of handling the mud hose when moving tools to a new location. The hose may be wrapped around the spool with ends chained together. A bottom to the spool provides a place for small fittings.

This unit protects rotary hose in transit.

PETRECO Saves MONEY FOR PRODUCERS

Let The Oil Doctor Solve Your Emulsion Problems

Producers who are inclined to look upon the treatment of crude oil emulsions as an undesirable expense should investigate the *profit possibilities* of Petreco Electromatic Dehydration. Instead of being an expense, Petreco usually has a high pay-off value through lower cut and higher gravity which bring a higher price per barrel; and also through greatly reduced handling and operating costs. This fact is verified by the number of additional units and new plants installed by many operators.

As a safeguard against losses and unnecessary expense, Petreco provides a comprehensive Advisory Service that every producer should know about. If you do not, contact your nearest Petreco office and obtain complete, detailed information. There is no cost or obligation involved.

PETROLEUM RECTIFYING COMPANY OF CALIFORNIA
General Offices: 530 West Sixth Street, Los Angeles, California

Gulf Coast Division
1312 Petroleum Bldg., Houston, Texas

Eastern Division
648 Edison Bldg., Toledo, Ohio

Representatives in Principal Oil Fields and Refining Centers

PETRECO
DEHYDRATION DE-SALTING

A Monument for the Lucas Gusher

Start Move to Commemorate Spindletop Discovery

As a tribute to a man and an event, a movement has been started to erect a monument over the site of the Lucas Gusher, discovery well of Spindle Top, near Beaumont, Texas. The man to be honored is the late Captain Anthony F. Lucas, and the event is completion of what still is considered the outstanding oil well of the American petroleum industry. It "blew in" January 10, 1901.

The Lucas Gusher Monument Association has been formed. J. Cooke Wilson is president; S. W. Pipkin, vice president; Scott W. Myers, secretary, all of Beaumont, and M. E. Brock, Gulf Oil Corporation, Houston, treasurer. The plan is to raise money within the petroleum industry and erect a suitable monument, to be dedicated January 10, 1941, the fortieth anniversary of completion of the famous well.

Objectives of the association, its methods, and a list of the men now active in the movement all are presented in the following outline of the association:

Lucas Gusher Monument Association was incorporated under the laws of Texas without capital and as a non-profit organization.

Its sole object is to erect a suitable monument to commemorate the bringing in of the Lucas Gusher in the Spindletop Oil Field, Jefferson County, Texas, on January 10, 1901, and to raise money for that purpose.

Those sponsoring the movement in addition to the officers of the association, are:

L. F. Benckenstein, Orange, Texas.
R. Lee Blaffer, Houston.
W. V. Bowles, Houston.
R. L. Dudley, Houston.
E. W. Gildart, Beaumont, Texas.
Amos K. Gordon, Baton Rouge, Louisiana.
Al W. Hamill, Tulsa.
George A. Hill, Jr., Houston.
Harry C. Hanszen, Houston.
Captain J. F. Lucey, Dallas.
Marrs McLean, San Antonio.
John W. Newton, Beaumont.
R. W. Pack, Beaumont.
J. Edgar Pew, Philadelphia.
J. H. Phelan, Beaumont.
General W. B. Pyron, Houston.
T. F. Rothwell, Beaumont.
Beeman Strong, Beaumont.
W. C. Tyrrell, Beaumont.
Joe E. Wallis, Los Angeles.

The proposed monument is to be of monolithic design, 30 or 40 feet high, of Texas granite, and is to be erected on Spindle Top on land 100 feet by 100 feet with the Lucas Gusher original location as the center. The site has been secured without cost from the owners, McFaddin, Wiess & Kyle, of Beaumont. Permanency in construction and design will be the paramount aim.

There will be no general solicitation for funds. The campaign will be mostly conducted by correspondence and limited very largely to those companies and individuals who started in the oil business following the bringing in of the Lucas Gusher.

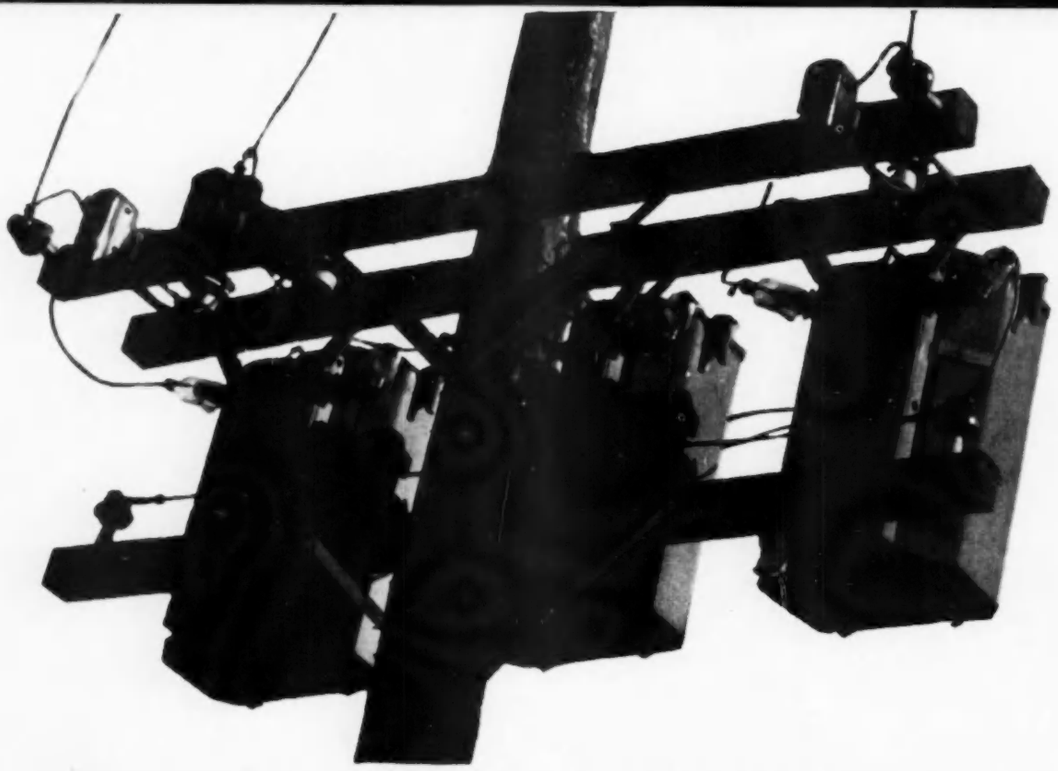
Contributions of from $100 to $500 only will be directly solicited.

It is proposed to place in the base of the monument, underneath the obelisk, a permanent receptacle to contain information about the well, a history of the oil business as developed since 1901 and pertinent facts and names connected and identified with the oil industry.

Every effort will be made to have the monument completed by January 10, 1941, the fortieth anniversary of the "blowing in" of the well.

While plans have not yet been perfected, Beaumont has in mind, upon completion of the monument, having a home-coming party for the oil fraternity generally, and for the old-timers particularly.

All Over the World
Master Engineering by "PETROENG"
RECYCLING PLANTS
Designed for Maximum Profits
PRODUCING:
DISTILLATE
MOTOR FUEL
NATURAL GASOLINE
LIQUEFIED BUTANE
and PROPANE
One or All
PETROLEUM ENGINEERING, INC.
DESIGNERS AND BUILDERS OF PLANTS
Vapor Recovery
Butane, Propane
Natural Gasoline
Crude Stabilization
TULSA - OKLAHOMA
CABLE ADDRESS—PETROENG



TRANSFORMING . . .

Economical Power into Constant Efficiency!

● *Two well hook-up in Robbins Pool, Kansas, operated by Utility Electric Power. Depth of wells, 3,115 feet.*

● **Here's your source of limitless power which you can obtain without any capital power investment, for it is always available and adequate to handle your smallest or lowest power job.**

With but a touch of a switch, this clean, smooth, quiet power goes to work for you, operating hour after hour, month after month at exactly the speed and efficiency you demand of it.

No other power is available in such a dependable and consistent supply as Utility Electric Power.

The obligation of your Electric Power Service Company is to provide a constant, dependable supply of power. For this finest of all power services, you pay only for the power as you use it. No capital power investment required.

Think this over, and let an experienced sales engineer from your Electric Power Service Company explain the benefits of Utility Electric Power at your earliest convenience.

PROFIT! BY USING Utility ELECTRIC POWER

Use Utility Electric Power

● *The Petroleum Electric Power Association is the outgrowth of a desire on the part of Electric Power Companies to render greater service, through cooperative effort, to the Petroleum Industry.*

PETROLEUM ELECTRIC POWER ASSOCIATION

HIGHLIGHTS IN THE WEEK'S NEWS

Allowables

Bureau Predicts 33,400-Barrel Decline in Market Demand

Believing that the oil industry has topped the peak for 1940, the United States Bureau of Mines on August 20 forecast a market demand in September for a daily average production of 3,624,300 barrels of crude oil, 33,400 barrels below the estimated demand for the current month and 104,100 barrels under the actual demand in September, 1939.

This was the first decrease forecast by the bureau since it predicted that March demand would be under that of the preceding month, although actual production has been declining for more than three months, since a new all-time record of 3,873,400 barrels a day was registered in April.

In its report, the bureau called attention to the efforts of the industry to adjust itself to current conditions, commenting that "real progress has been made by the refining branch of the industry over the past month in adjusting crude runs and gasoline and distillate yields so as to reduce the still abnormally high inventories of gasoline while proceeding with a satisfactory seasonal build-up in distillate stocks."

The bureau pointed out that daily average crude production during the five weeks from July 6 to August 10 was 3,560,000 barrels and runs to stills 3,521,000 barrels, resulting in an increase of an average of 60,000 barrels a day in domestic crude stocks, and indicating a demand of 3,500,000 barrels compared with the bureau's estimate of 3,634,000 barrels. The rapid decline in crude demand over the past month, it was explained, "reflects chiefly the curtailment in refinery activity, although exports, fuel and losses appear to have been much lower than expected."

The export ban on aviation gasoline may result in the additional curtailment of foreign shipments to the extent of several hundred thousand barrels monthly, the report warned, adding, however, that the June total of 2,581,000 barrels of exported motor fuel was "surprisingly high."

"As predicted," the report commented, "the imposition of the half-cent additional federal tax on July 1 spurred refinery shipments late in June, and the domestic demand of 55,459,000 barrels was perhaps two million barrels above what it would have been normally."

The bureau believes, however, that this pre-tax buying should be compensated by reductions in sales in July and August, but probably not in September, and accordingly placed the domestic demand for next month at 52,900,000 barrels, or 7 percent above the demand for September, 1939.

Forecasts by the principal exporters of motor fuel indicate that the volume in September will be slightly less than 40 percent of last year, making an estimate of 1,600,000 barrels, compared with 1,900,000 barrels forecast for August.

The report showed that stocks of finished and unfinished gasoline amounted to 93,569,000 barrels on June 30, and that American Petroleum Institute figures indicate that something over 5,000,000 barrels were taken out in July, so that the amount on hand July 31 should have been just over 88,000,000 barrels. It was estimated that an additional reduction of 4,000,000 barrels will be made in September, compared with 6,400,000 barrels for August.

Benzol production and direct sales of natural gasoline are estimated at 1,200,000 barrels, the same as in August, making an indicated refinery production of 49,300,000 barrels, which should be distributed among the several districts as follows:

East Coast, 6,720,000 barrels; Appalachian, 1,820,000 barrels; Indiana-Illinois, 10,310,000 barrels; Oklahoma, 3,050,000 barrels; Kansas, 2,740,000 barrels; Inland Texas, 3,510,000 barrels; Gulf Texas, 11,620,000 barrels; Gulf Louisiana, 1,390,000 barrels; Inland Louisiana, 860,000 barrels; Rocky Mountain, 1,350,000 barrels; California, 5,930,000 barrels.

Estimating natural gasoline to be blended at refineries at 7 percent of the total refinery production, or 3,450,000 barrels, and the yield of straight-run and cracked gasoline as 43.2 percent, the bureau, applying that yield to the production of 45,850,000 barrels, estimates crude runs at 106,130,000 barrels, or 3,537,700 barrels a day.

Exporters' forecasts indicate that exports of crude petroleum will be considerably higher than generally anticipated, leading to an increase of the bureau's forecast from 3,700,000 barrels in August to 3,900,000 barrels next month. The estimate for crude to be used for fuel and losses is 2,100,000 barrels.

These estimates, the bureau said, indicate a total demand for domestic crude oil in September of 108,730,000 barrels, or 3,624,300 barrels a day, broken down by producing states as shown in an accompanying table.

Bureau Forecast of Crude Oil Demand in September

STATE	Forecast September, 1940	Forecast August, 1940
Texas	1,320,300	1,326,400
California	593,000	598,400
Illinois	430,000	440,600
Oklahoma	397,000	402,600
Louisiana	274,700	276,100
Kansas	170,700	166,800
New Mexico	105,300	105,200
Wyoming	75,300	81,300
Arkansas	69,700	65,200
Michigan	55,700	57,100
Pennsylvania	47,600	48,000
Montana	17,700	20,600
New York	13,700	14,000
Kentucky	13,300	13,900
Mississippi	9,700	10,300
Indiana	9,300	10,000
West Virginia	9,000	9,000
Ohio	8,300	8,000
Colorado	4,000	4,200
	3,624,300	3,657,700

News Index

General:

- Allowables 43
- Pipe Lines 44
- Washington 44
- Compact 45
- Courts 45

Men in News 50

Markets-Statistics 52

World Wide Developments 56

U. S. Field Operations:

- Arkansas 70
- California 72
- Completions 73
- East Texas 65
- Forest City Basin 59
- Illinois 59
- Indiana 59
- Kansas 60
- Kentucky 59
- Louisiana Coast 68
- Michigan 72
- Mississippi 70
- New Mexico 71
- North Louisiana 69
- North Texas 62
- Oklahoma 60
- Rocky Mountain 71
- Southwest Texas 66
- Texas Gulf Coast 67
- West Texas 64
- Wildcat Development 78

Oklahoma Operators Meet August 30

At a hearing called last week for August 30, Oklahoma operators will decide whether to establish a crude allowable for September only, or to issue a 90-day order. Oklahoma adopted a 90-day order for May, June and July, complying with a recommendation of the Interstate Oil Compact Commission, but dropped back to a 30-day order for August.

California Cuts Well Below Demand Estimate

California cut back 16,000 barrels in setting September allowable at 571,000 barrels. The reduction, which brings the state figure to 22,000 barrels below the United States Bureau of Mines' estimate of market demand, was made in anticipation of a shrinkage in domestic demand and an expected 5,000,000 barrel drop in exports during the balance of the year.

The allotment to maximum wells was cut from 163 to 157 barrels in effecting the reduction.

Texas Order This Week; Kansas Hearing August 29

Commissioner Lon A. Smith of the Texas Railroad Commission last week announced a proration order for September was being drafted, with release scheduled for August 26. Few, if any, changes will be made in present producing schedules, and the current shutdown program probably will be followed, he said.

The Kansas Corporation Commission

set a hearing to determine market demand for August 29, at Wichita. The order to be issued following the hearing will apply for 30 days, the commission announcing abandonment of a recent plan for 90-day orders because "unsettled conditions in the industry make it advisable to keep in closer touch with purchasers and producers."

Arkansas September Figure Unchanged From August

The Arkansas Oil & Gas Commission set the state allowable for September at 75,105 barrels, unchanged from the August level. The commission, which will meet at El Dorado September 16 to set the October allowable, set a 30-day allowable as bottomhole pressures will be taken before September 16.

Pipe Lines

New Jersey Company Halts Illinois Oil Purchases

Standard Oil Company of New Jersey last week discontinued purchases of Illinois crude for use on the Atlantic seaboard, which during peak periods amounted to 20,000 barrels a day.

The action came with an increase of 10 cents a barrel in posted price in the Sucker state, to $1.15 a barrel, and was due also to a decline in tanker rates from the Gulf Coast to the East.

The New Jersey company had been paying about 40 cents a barrel to have Illinois oil piped to its eastern market, which compared to tanker rates from the Gulf Coast that reached as high as 60 and 70 cents a barrel during the past winter. The current tanker rate is about 19 cents a barrel, the drop occasioned with closing of the Mediterranean Sea to American shipping with Italy's entrance in the war.

Reserve Gas Pipe Line Company Establishes Office

Temporary headquarters of the Reserve Gas Pipe Line Company, which recently filed application with the Federal Power Commission to construct a 1500-mile natural gas pipe line from Texas and Louisiana fields to New York, have been established in Dallas.

The company proposes to lay a combination 24-26-inch carrier that will originate in the Corpus Christi district, Southwest Texas, and also draw on gas reserves in Louisiana. The line is expected to have a rated capacity of 300,000,000 feet daily.

J. Wallace Bostick and S. N. Van Wert, both of Dallas, are president and vice president, respectively, of the firm, which recently obtained charter as a Texas corporation.

Plan Pipe Line Outlet For Falls City Pool

Union Pipe Line Company, Centralia, Illinois, headed by Thomas H. McCullough, last week was negotiating for right-of-way for a gathering line system in the Falls City field of Nebraska, for a pipe line to the Missouri Pacific Railway yards at Falls City.

McCullough said he was prepared to purchase 2500 barrels a day at 80 cents a barrel, and would ship the oil to Minneapolis.

Washington

Seek Probe of Anti-Trust Prosecutions Status

A sweeping Congressional investigation of the situation surrounding the Department of Justice's proposed anti-trust suits against the oil industry was demanded last week by Representative John M. Coffee, of Washington.

In a resolution introduced August 21, Coffee sought an inquiry by a select committee of Congress into "interference" by any federal agency, officer or employe with enforcement of the anti-trust laws, declaring that he saw no reason for dropping any civil actions against monopolies because of the national defense situation.

His resolution was an evidence of dissatisfaction felt among some members of Congress over the holding up of proposed suits against 22 major oil companies and their subsidiaries at the request of the National Defense Advisory Commission pending a study of the possible effect of the suits on the defense program. Similar criticisms have been voiced in the Senate, notably by Senator Guy M. Gillette, of Iowa.

"Congress has appropriated substantial funds for enforcement of the anti-trust laws," the congressman asserted "Without doubt, there is something radically wrong when the drive to enforce these laws is stopped immediately after many labor unions have been indicted and on the eve of a drive to bring the real monopolistic offenders before the bar of justice.

"It is the purpose of the proposed investigation to determine and disclose to the public the mysterious forces or persons that are meddling with or scuttling the anti-trust enforcement drive which is the mandate of Congress by both regular statutes and appropriation measures.

"I fail to see anything in national defense which would seem to necessitate or require the dropping of civil actions against the oil monopoly or any other industrial monopoly.

"If anything, the pipe line and marketing divorcement suit is in the direct interest of national defense. The suit should be instituted and vigorously pressed against major oil companies on the Pacific Coast and elsewhere. If there are 22 major oil companies leagued in conspiracy, as is indicated by the Attorney General's press release of August 1, just what are we waiting for?"

Coffee also expressed his opposition to the settlement of anti-trust suits by consent decrees, holding that they are no deterrent to monopolistic practices.

"As to anti-trust suits once instituted against industrial monopolies," he said, "I am opposed to consent decrees and private and secret arrangements for 'no contest' pleas between the government and defendants in either civil or criminal cases whereby large concerns may pay a nominal fine of $5000 or less, and then repeat or continue their monopolistic practices. Any collusion between the defendants and prosecutors is to be frowned upon. In enforcing the anti-trust laws the 'deals' should be made in the presence of the district judge."

Earlier, Thurman Arnold, assistant attorney general, advised Gillette that turning over the proposed suit against oil companies to the National Defense Commission for study did not imply "waiver of the anti-trust laws."

"As a matter of courtesy to the defense commission and information to this department, the matter was referred for study as to possible effect on national defense," Arnold told Gillette. "Their recommendations will be carefully considered with respect to modifying any of the relief sought in the oil suit, if, as a matter of fact, it appears that the interests of national defense are involved. This does not mean a waiver of the anti-trust laws. We anticipate no conflict.

"We are convinced that the oil suit will, in a civil proceeding, settle various issues which until now have been the subject of numerous criminal cases, all of which the department has won," he added.

Steps Taken to Assure Defense Supply of High-Test Gasoline

Moving swiftly along two lines, Congress and the Administration last week took steps to insure an adequate supply of aviation gasoline for needs of the national defense program.

Definite moves to that end included:

1. Inclusion by the Senate Appropriations Committee of a $3,000,000 fund in the $5,000,000,000 supplemental defense appropriation bill, for the storage of aviation gasoline at various locations throughout the country.

2. Creation of a Defense Supplies Corporation, with a capital of $5,000,000 and a fund of $50,000,000 for the purchase of high-test gasoline.

3. A meeting of a special committee of oil company engineers to advise the Army and Navy on storage systems.

Approval of the $3,000,000 for the construction of storage facilities was given by the Senate committee after Secretary of the Navy Frank Knox had disclosed that plans of the Army and Navy call for a total expenditure of $7,000,000 for storage for sufficient aviation gasoline to meet the needs of the two services for three or four months.

Secretary Knox explained that the Navy proposes to spend $2,500,000 on such facilities while the War Department, which will need twice as much gasoline, will expend $5,000,000.

Constant Reserve

"It is designed to keep this supply of aviation gas pretty nearly normal," he said. "As we use it up, we put additional gas in, so as to keep a steady pool to supply our war necessities for three or four months."

At the present time, the committee was told, the capacity of the industry to supply 100-octane gas is considerably in excess of the peacetime requirements but "that capacity is far short" of meeting wartime needs.

It was indicated that the greater part of these storage facilities would be underground, it being the concensus of defense officials that such storage would be safer from attack and only a little more expensive than surface storage.

Navy officials explained to the committee that the funds for the purchase of gasoline would be advanced by the Reconstruction Finance Corporation, which would be reimbursed by the Army and Navy as gasoline was with-

drawn from storage for use. The price paid by the two departments would be slightly more than that paid by the RFC, the surcharge being to cover the latter's expenses in connection with the operation.

At the same time, it was said, the price of gasoline to the two services will probably be no greater because of the surcharge than if they had bought directly from the refiners, because the RFC will get better quantity prices. At least one company now is building a refinery to manufacture aviation gasoline, Secretary Knox said.

The purchase of gasoline for storage will be carried out through the Defense Supplies Corporation, created by the Reconstruction Finance Corporation. The new organization will have a capital of $5,000,000, the stock to be held by the RFC, and the latter also will advance $50,000,000 for the acquisition of gasoline. This will be in the form of a revolving fund, and as the Army and Navy draw from the stored stocks, additional purchases will be made so that at all times there will be a supply of gasoline sufficient to meet all needs for 100 days.

The storage facilities which it is proposed to construct will be located at strategic points throughout the country, but the sites have not been disclosed.

The meeting of the special engineering committee put under way several weeks of study designed to develop storage systems best suited to the needs of the military services.

Committee Personnel

The committee met with Dr. Robert E. Wilson, chief of the petroleum section of the National Defense Advisory Commission, August 20 for a preliminary discussion of the problem. Also present were Army and Navy officers who will be in charge of their departments' storage operations.

The committee, selected at the request of the two departments, includes Scott E. Drummond, Standard Oil Company of New Jersey; W. B. Engelbrecht, Phillips Petroleum Company of California; S. P. Johnson, Standard Oil of California; O. B. Lewis, Ethyl Gasoline Corporation; C. D. Norris, The Texas Company; Walter Semans, Sun Oil Company, and E. D. Seymour, Socony-Vacuum Oil Company. The group, Dr. Wilson said, are outstanding terminal designers and are being loaned by their companies for service to the government without compensation.

An adequate supply of helium to meet any national defense needs was assured by Secretary of the Interior Harold L. Ickes, who said the Amarillo, Texas, plant can increase its production by 50 percent without difficulty.

Steps also were taken during the week to make effective President Roosevelt's embargo on the export of aviation gasoline to destinations outside the Western Hemisphere, and new clearance application forms were put in use at ports of export, which will be forwarded to Washington for approval by the Merchant Ship Control Bureau of the Treasury Department before oil-carrying vessels can clear. Separate forms have been provided for clearances to ports in this hemisphere and for places outside that area, in each of which there is provision for a statement by the collector of customs in event of suspicious circumstances and for his recommendation as to whether clearance should be granted.

Both application froms inquire as to the name, nationality, destination and intended sailing time of the vessel; the name of the owner, the charterer, if any, and whether ownership, wholly or in part, is vested in a country at war or under military occupation. A brief description of the cargo must be given, and on applications for clearance to ports within the Western Hemisphere it must be stated whether or not the ships are armed.

When it is intended to clear ships for destinations outside the Western Hemisphere and the cargo consists in any part of petroleum products, quantities must be shown on the application on a basis of 42-gallon barrels and long tons according to the following classifications:

1. Fuel oil and gas oil (including Diesel oil).

2. Crude, classified as: (a) Blended or California high-octane crude (any material from which by commercial distillation there can be separated more than 3 percent of aviation motor fuel, hydrocarbon or hydrocarbon mixture) and (b) all other crude.

3. Gasoline, classified as: (a) aviation motor fuel (as defined in the President's regulations of July 26) and (b) all other gasoline (including kerosene and benzine).

4. Lubricating oil, classified as: (a) aviation lubricating oil (as defined by the President's regulations of July 26) and (b) all other lubricating oil.

5. Tetraethyl lead (as defined in the President's regulations of July 26).

6. Boosters, such as iso-octane, iso-hexane or iso-pentane.

Courts

Set Trial Dates in Madison Anti-Trust Cases

Trial date in the "second Madison case," in which a group of major oil companies and company officials were indicted four years ago for anti-trust law violations allegedly fixing jobbers' margins through use of uniform contracts, was set last week for November 19. The trial will be held in Madison.

Involved are companies and individuals who did not enter pleas of nolo contendere following conviction of a group in the first trial.

Federal District Judge Walter C. Lindley, to whom the cases were referred after Federal District Judge Patrick T. Stone requested to be relived of the matter following a four-month trial of the first case, set retrial date of 12 companies and five individuals for January 20. This group was granted a second trial by Judge Stone at the conclusion of the first trial.

Supreme Court to Hear East Texas Suit in November

The United States Supreme Court is expected to hear a Humble Oil & Refining Company suit challenging the East Texas proration order in November. Assistant Attorney General James P. Hart of Texas has been advised by the clerk of the court that after this case is heard the second suit brought by Rowan & Nichols Oil Company is expected to follow.

Compact

Defense Needs and Production Curtailment Features Meeting

Assurance that the oil industry has adequate supplies and facilities to meet any national defense requirements, and advocated continued curtailment of production and runs to stills were highlights of the Interstate Oil Compact Commission meeting in Oklahoma City last week.

Improvements in transportation and storage facilities were recommended in a letter from Dr. R. E. Wilson, of the petroleum division of the National Defense Advisory Committee. This was supported further by a statement from W. R. Boyd, executive vice president of the American Petroleum Institute.

Continued curtailment of production, runs to stills and refinery yields so as to prevent the accumulation of excessive gasoline stocks was the program advocated in reports from the United States Bureau of Mines, the American Petroleum Institute and the Independent Petroleum Association of America. These indicated that production should continue at 3,500,000 barrels daily during the winter if stocks of gasoline were not to exceed 85,000,000 barrels by April 1, 1940.

To consummate this program, refiners must not increase runs to stills, nor cut more than 43 percent gasoline on the average, although an increase of 5 or 6 percent in the domestic gasoline market is anticipated. This might be increased to some extent by a mild winter, but gains from that source would be offset by a decrease in the market for heating oils.

Industry Ready—Wilson

In a letter to the commission, Wilson said the industry was in condition to meet emergencies. In fact, he thought some units might be diverted to other uses in order to eliminate bottlenecks.

"One of the most gratifying features of my work in the petroleum section of the Defense Advisory Commission is the fact that our country, in striking contrast to all the warring nations, need have little concern as to the overall adequacy of its supplies of crude petroleum," Wilson wrote. "While the petroleum demands of modern mechanized war are far greater than during the last year, our defense planning does not have to face the prospect of high crude prices in order to stimulate production, or the likelihood of gasoline-less Sundays due to any shortage of gasoline (barring possible interruptions of transportation). This greatly improved situation is largely due to the conservation measures which have been adopted by most of our producing states.

"These measures have provided a huge underground reservoir of almost any desired type of crude available as needed, without uneconomic drilling or large requirements for labor and materials at a critical time. These states which have pursued sound conservation policies, have, of course, far greater ability to meet the demands of a war emergency than have those states which have permitted uncontrolled and wasteful production to leave them with

uncertain and probably declining supplies just when they might be most useful.

"As to the probable effect of defense activities and programs on our crude petroleum requirements, it will apparently be a good many months before gradually increasing demand offsets the heavy losses of export markets which the industry has suffered," Wilson added. "Demand for heavier crudes will probably increase more rapidly than those for lighter, and later there will be need for increased allowables for those crudes yielding high-octane aviation gasoline, possibly with correspondingly decreased demand for other crudes.

Fire Protection

"Regarding matters of defense which need individual study and action by the industry, somewhat better fire protection for tank farms and various protective measures for important pipe lines and refineries appear to be desirable. The building by the industry of crude and gasoline pipe lines where they will decrease shipping requirements, especially along the Atlantic Coast, would seem to be desirable from a defense viewpoint. Serious consideration should also be given to burying any new construction of storage tanks at important ocean terminals.

"Regarding the activities of the Defense Advisory Commission, its essential functions include the study of Army and Navy requirements for all important raw materials and finished equipment, comparing these with the present industry capacity or ability to manufacture. Where possible bottlenecks are indicated, there is encouraged the creation of stock piles, the construction of additional manufacturing equipment, or the initiation of such other steps as may be necessary to meet the needs of the two services.

"Analysis of the large and varied requirements of the Army and Navy for petroleum products indicates no serious bottlenecks providing the industry continues to expand to meet its ever-growing demands. A program of building up substantial government-owned stocks of 100-octane aviation gasoline has been recommended and will probably be undertaken very shortly. As a matter of fact, not only will the industry be able to take care of all probable demands for its own products, but it will be called upon to help eliminate bottlenecks in other industries—in particular the production from petroleum, by recently developed synthetic processes, of synthetic rubber and toluene for TNT."

Wilson emphasized the "importance to our national welfare of the efficient operation of state agencies, such as the compact."

"In my opinion, Washington has more than enough problems at present without having to assume additional responsibilities so long as they can be adequately handled through decentralized agencies," he said.

Industry Prepared for War Demand

Boyd told the compact the petroleum industry would be fully prepared to serve both civilian and military needs if war again should come.

Coordination and adaptation of systems of petroleum refining, distributing and transportation systems to meet specific military needs may be necessary, Boyd said, but otherwise "the American people may have the satisfaction of knowing that they would enter a conflict with the largest and most capable petroleum industry, the greatest reserves, and the most extensive productive facilities of any nation in the world."

Comparing the petroleum industry's present position with that of 1917, Boyd estimated that there are in the United States nearly twice as many producing oil wells, and that crude oil reserves are three times as great. Since 1917, the number of refineries has been doubled and their capacity multiplied by four. Stocks of essential products are 10 times larger than in 1917, and storage capacities correspondingly greater. Land transportation facilities are more than twice as extensive and marine transportation equipment eight times as large.

Pointing out that principal military needs are for motor fuels and lubricants, Boyd said that the average yield of gasoline from a barrel of crude oil has been doubled. The production of finished gasoline is seven times as great as in 1917, the production of natural gasoline has been multiplied by 10, and the production of lubricating oils is nearly twice as large.

Gains in Manufacture

"Motor fuel now is being obtained from prolific sources never before available," he declared. "American petroleum refiners have led the world in developing new processes for manufacturing and in the normal production of high-test aviation fuel. Productive capacity for some of these fuels already is 10 times the consuming capacity of this country's entire present air fleet, military and commercial."

The petroleum industry has developed processes for the production of new products on a large scale, he said, among them synthetic rubber and toluene, used in the manufacture of T.N.T.

"It should not be overlooked that the United States for years has owned and operated more motor cars and trucks than any other nation," continued Boyd. "At the same time it has built and placed in operation more local oil storage plants and more roadside service stations. Some of these may be uneconomical or unprofitable to the industry, but it is probable that should our armed forces start a military engagement anywhere in this country, they would find temporarily available locally sufficient supplies of motor fuels and lubricants to keep their equipment operating at full efficiency until a permanent service of supply could be established.

Distribution Adequate

"Perhaps, after all, the day may come when this nation may benefit greatly by the fact that the American petroleum industry has established these outlets for its products at places where neither food nor postage stamps may be obtained. And there is little question that the industry's productive capacity and efficiency of operating are such that emergency needs of the military and of industry, as well as the normal needs of industry and of the civilian population, simultaneously and adequately could be met.

It is my considered judgment that the government—and by the government I mean the executive (including the administrative and defense planning agencies) and the legislative branches of the federal government—and the American public, need not do any worrying over the possibility of a failure of having adequate natural crude oil production to meet all the national, industrial and civilian requirements in time of peace or war, or for many years to come. Nor should they be concerned about the industry's ability to augment the supply of well-oil through the prompt production of substitutes from coal and oil shale whenever in time of peace or war it is economically desirable or otherwise necessary to do so. Neither do I think the time will ever come when the consumer will find dislocation of his supply, nor that the price he will have to pay will be exorbitant."

F. S. Lott read a report prepared by G. R. Hopkins, of the Bureau of Mines, in which Hopkins said the forecast for September was 7 percent above September, 1939. He forecast 5 to 6 percent increase in domestic demand for the entire next quarter.

While exports have declined sharply since the fall of France (the total for June was 2,581,000 barrels), Hopkins estimated 1,500,000 barrels monthly for the last quarter.

If the current curtailment of refinery runs continues, the 4,000,000 barrels of gasoline in storage above the normal September amount may be absorbed.

Reduced gasoline yields with consequent increases in heating oil yields will ease the heating oil outlook for the winter. Distillate stocks are now several million barrels higher than they were a year ago, with the increment growing rapidly, Hopkins said.

However, it would be unwise to become complacent on the heating oil situation at this time of the year, he warned. Assuming that crude runs to stills remain at the round figure of 3,500,000 barrels daily through April, 1941, when stocks of distillate are expected to reach their low, the demand for heating oils is expected to be 10 percent higher than last year east of California, and 5 percent higher in that state. After making suitable adjustments for export and other declines, it is estimated that stocks of distillate will reach a peak of 47,000,000 barrels on October 1, 1940, and drop to a low of 25,000,000 barrels on April 30, 1941.

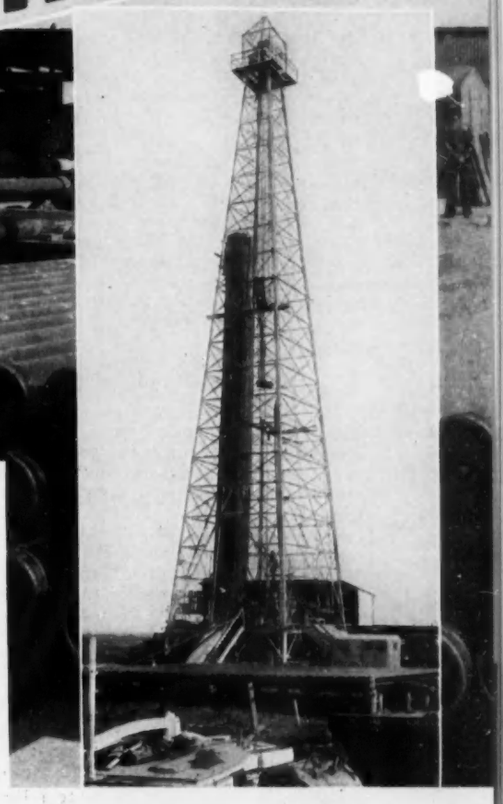
If the winter is mild, runs to stills might be dropped to 3,400,000 barrels and the necessary burning oil be supplied. After export demand is added, it appears that a maximum of 3,580,000 barrels daily will constitute the demand for the next six months.

Van Covern on Statistics

Fred Van Covern, director of the department of statistics for the American Petroleum Institute, called attention to almost continuous declines since July 1 in the amount of crude produced in the United States, and in the level of crude oil run to refinery stills. Inventories of furnace oils and other light fuels were also improved, he said.

The statistician predicted a 13 percent increase, to 2,150,000, in the number of home-heating oil burners in use on an average during the coming winter, and an increase of 12 to 17 percent in the domestic demand for gas oil and distillate fuel, of which heating oil comprises the major portion. Exports are expected to be down to such an extent, however, that the net increase

10,505-foot String of SMITH CASING in 11 Hours, 5 Minutes!



"IT RAN PERFECTLY," said the Parker Drilling Company, contractors in charge of the Barnsdall Oil Company's Nelson Development No. 1 well at Point Au Fer, Louisiana. The first joint was set at 11:45 A.M. and the last at 10:50 P.M. *of the same day.* That's averaging nearly a thousand feet an hour, which is speed that speaks for itself.

Faster running time, due to precision-threaded joints, is only one of the advantages of using Smith Casing. It is made by a unique method which provides *an automatic test of each length,* thereby assuring *actual* safety factor. This method also gives Smith Casing greater collapse resistance and greater pull-out strength without increased weight—without increased cost . . . or equal strength and safety factor at LOWER cost. Send the figures for your next string to the nearest A. O. Smith office listed below and see how much money *you* can save with safety.

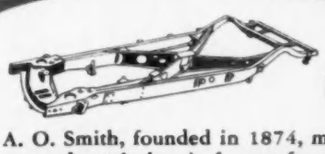
A. O. Smith Corporation, Milwaukee, Wis. Offices at New York, Pittsburgh, Chicago, Tulsa, Dallas, Shreveport, Houston, Corpus Christi, Los Angeles.

Smith Casing used in the Barnsdall Oil Company well at Point Au Fer, Louisiana was 8⅝" T & C (short coupling) *High Yield* grade.

489 feet of 43-pound casing;
1015 feet of 38-pound casing;
9002 feet of 36-pound casing.

Safety factor in collapse: 1.067 based on published values; 1.266 based on *actual test values.*

★ *You Can Save $1000 or More on Each Well . . . Safely . . . with SMITH CASING.*



DID YOU KNOW?

A. O. Smith, founded in 1874, makes pressed steel chassis frames for automobiles at the rate of 12,000 per day. The Smith plant covers 125 acres and employs some 5,000 men. 25,000 tons of steel products, on an average, leave the Smith plant monthly—the largest consumer of rolled plate in the U. S.

A.O.SMITH
CORPORATION
Milwaukee, Wisconsin

MANUFACTURERS OF ELECTRIC-WELDED
Casing
Pressure Vessels • Line Pipe

in total demand may be only 6 to 9 percent.

Crude oil production reached peaks around 3,800,000 barrels daily in March and April, and then began to decline, dropping to 3,600,000 barrels on July 6 and to 3,475,000 barrels on August 10. The amount of crude oil run to stills began to decline late in June, the August 10 figure of 3,435,000 barrels representing a decrease of 255,000 barrels in the daily rate of runs during the seven-week period ended that date.

Total inventories of finished and unfinished gasoline were reported at 88,000,000 barrels on August 10, a decline of about 15,500,000 barrels since March 31, but still 12,000,000 barrels greater than on the corresponding date in 1939, this difference being in direct comparison with the 16,500,000 barrels greater inventories which existed on March 31 of this year.

Reporting on exports in the January to June, 1940, period, Van Covern said that crude oil shipments were down nearly 25 percent, gasoline off 44 percent, kerosene off 38.5 percent, with light fuel oils and heavy fuel oil shipments off 28.8 and 17.8 percent, respectively. Lubricants, on the other hand, showed an increase of 28.5 percent.

Fell Condemns Imports

Harold Fell, speaking for the Independent Petroleum Association of America, complained primarily of excessive runs to stills at some refineries, and the high rate of imports. He estimated that United States production should average 3,500,000 barrels daily during the rest of the year to balance supply with demand. Of that amount, he said 2,930,000 barrels should be produced in states east of California, or 100,000 barrels less than the September forecast of the Bureau of Mines, and 140,000 barrels below the actual production of crude oil for the last four months of 1939.

As corrective measures, Fell recommended that crude oil production be kept within actual demand and that gasoline stocks should be materially reduced during the last four months of the year. In the same months of 1939, they were increased.

"It is essential," he said, "that refiners do not fail to take advantage of their opportunities during the coming months. In order to meet the increased demand for heating oils and fuel oil during the coming winter months it would be helpful to reduce the output from wells of high-gravity oil with a large gasoline content, and increase the output from wells producing oil of heavier grades.

"Crude oil production exceeded demand during the first six months of this year, and almost all of the principal oil producing states contributed to the excess. Another unfavorable development has been a 75 percent increase in taxable imports of cheap foreign oil.

"The high rate of imports is continuing and is displacing domestic oil and offsetting the efforts of conservation agencies to balance supply with demand."

Fell said it was the duty of the compact to take the lead in enforcing conservation measures.

"The willingness of the commission to accept this responsibility and recognize its opportunities will be of the utmost importance to the future of the petroleum industry," he said.

Illinois Situation

Dr. W. H. Voskuil, director of production for the Illinois Geological Survey, reported a continued decline in production from that state. He declared, however, that Illinois production had not competed with Gulf Coast crudes. During the second quarter of the year the state produced 14,000,000 barrels monthly, or 14.3 percent of the United States total.

In the past six weeks, production has dropped from 518,000 to 391,000 barrels daily. This decline is outside the Louden-St. Elmo area, which continues to produce 70,000 barrels daily. Production from one well in the Trenton lime is reported from Centralia. However, the well is 4000 feet deep and had an initial potential of only 120 barrels, which declined after the well was deepened.

During the Illinois flush period, shipments of crude to the Mid-West refining area increased from 8,000,000 to 10,000,000 barrels monthly. It has averaged 1,500,000 barrels per month for the Appalachian area, but increased in the Atlantic seaboard area from 387,000 to 783,000 barrels between January and June of 1940. This increase resulted from the difference between tanker and tank car rates.

Where Illinois in 1936 supplied 2½ percent of the oil to the two major refining districts, this supply has increased to 66.4 percent.

Twenty new pools have been discovered this year, but they are small, ranging in size from 10 to 1500 acres. There are now 66,000 acres producing in the state, but 66 percent of this is included in six fields. Dr. Voskuil indicated he thought there would be no material increase in the state's production soon.

A letter from Warwick Downing, representative from Colorado, suggested the compact might consider fixing allocations for the various states. He suggested that these be based on conservation alone and said he thought they would, through the weight of public opinion, do much to keep states and producers in line, whether they were members of the compact or not. He said he planned to seek the assistance of purchasers in determining the demand for various oils.

Louisiana and Kansas Stands

George Wilson, attorney for the Louisiana Conservation Commission, said that entrance of that state into the compact has been authorized by the legislature, but the governor has not yet reached a decision. He indicated his approval of the plan, but could not commit the governor.

"However, Louisiana has a new September order coming out which will be within 150 barrels of the Bureau of Mines recommendation," he said.

Andrew Schoeppel, speaking for Kansas, said the next proration meeting would look into the Illinois situation. He indicated that Kansas might increase production to supply oil no longer available from Illinois.

From these statements, it appeared that any reductions would have to be borne by Texas, Oklahoma and New Mexico, from which orders are expected soon.

Current Statistical Position

[*Continued from page 17*]

are some rather informative comparisons of yields and inventories in the principal light fuel oil supplying districts so far this year and for 1939.

In an appendix are detailed comparisons by products of the trends of exports during the first six months of this year for those who care to go into greater detail with respect to those figures.

Also included are the results of a study of available aviation gasoline statistics and the export situation as it had existed with respect to that product.

The appendix also contains tabulations of inventories of both gas oil and distillate fuel oil and residual fuels as of comparable dates in 1939 and 1940.

I should not like to conclude this paper without some further reference to the last quarter of this year and the first quarter of 1941.

But, first let me say before going any further, that I recognize the difficulties and uncertainties involved in looking so far ahead at any time and this is particularly so just now. I have done some thinking, however, through next winter and currently have the following general outline in mind.

(1) Domestic demand for motor fuel will probably increase 5.5 to 6 percent. Exports may be down as much as 45 percent with total demand up about 3 percent.

(2) That the present high level of sales of new automotive vehicles may contain some forward buying at the expense of sales in 1941 and particularly in the early part.

(3) Giving the demand for motor fuel during the year ended September 30, 1941, the benefit of the doubt, I think the industry must have a minimum of 85 million barrels of finished and unfinished gasoline in storage on March 31, 1941, in order to operate conveniently and economically.

(4) That there probably will be a tendency on the part of refiners to continue to take somewhat less than normal gasoline yields, and I have placed that figure at about 43 percent.

(5) That if a level of 85 million barrels of gasoline inventories is not exceeded on March 31, 1941, crude oil runs to stills will not have been greater than 3,400,000 barrels daily during the entire period.

(6) That other use of domestic

crude oil will probably total 125,000 barrels per day and that therefore crude production will not have been higher than 3,525,000 barrels each day during the six months, if the 85-million barrel level is not exceeded.

APPENDIX II
Aviation Gasoline

While domestic demand for aviation gasoline averaged about 400,000 barrels monthly during the first six months of 1940, production climbed steadily and passed the million-barrel mark for the first time in June. Stocks and exports also showed an upward trend reflecting both the accumulation of supplies at home and the increasing demand abroad. November, 1939, is the first month for which statistics were issued. The following table shows the changes that have taken place in the rate of production and exports and in the level of inventories since then.

PRODUCTION	November, 1939 (Barrels)	June, 1940 (Barrels)	Percentage Change
Production	811,000	1,009,000	+ 24.4
Stocks	2,400,000	3,904,000	+ 62.7
Exports	287,000	646,000	+125.1
Domestic Demand	411,000	401,000	— 2.4
Total Demand	698,000	1,047,000	+ 50.0

In view of the embargo on exports of aviation gasoline, total demand for all practical purposes is the extent of the domestic market which heretofore has shown a strong tendency towards stability. If this trend continues, production must depend upon further stock accumulation if it is not to recede to the level of domestic demand. The effect of shifts in international events and policy may be measured by changes in the following data for significant countries which have been buying 75 to 80 percent of the total amount of aviation gasoline exported:

January to June 6 Months Period

Shipped To	1939 (Barrels)	1940 (Barrels)
Netherlands West Indies	422,917	191,301
France	423,258	513,513
Japan	347,495	105,662
United Kingdom	467,412	504,096
Italy	179,839	.....
Non-Contiguous U. S. Territories	128,221	154,259
All Other Countries	635,917	319,929
Total	2,625,059	1,788,760

Similar effects of this trend of exports upon refining areas are revealed in the following table:

January to *May 5 Months Period

Shipped From	1939 (Barrels)	1940 (Barrels)
Texas Gulf	844,014	422,248
Louisiana Gulf	648,249	637,552
California	518,142	107,734
All Other Areas	53,347	46,463
Total	2,063,752	1,113,997

* June breakup by customs district from which shipments during that month were made was not available at time this was compiled.

It is needless to point out that the prospects for aviation gasoline demand depend upon the pace at which national defense measures proceed, the progress of civil and commercial flying and the turn of events in the conflict abroad.

APPENDIX 3
Inventories of Gas Oil and Distillate Fuel
(Barrels of 42 Gallons)

DISTRICT	March 31, 1939 U.S.B.of M.	Sept. 30, 1939 U.S.B.of M.	March 31, 1940 U.S.B.of M.	July 31, 1940 Estimated	July 31, 1939 U.S.B.of M.
East Coast	7,363,000	13,094,000	5,683,000	13,025,000	11,414,000
Louisiana Gulf	816,000	852,000	631,000	1,225,000	1,174,000
Texas Gulf	3,846,000	6,455,000	3,306,000	7,050,000	5,837,000
	12,025,000	20,401,000	9,620,000	22,300,000	18,425,000
Ind., Ill., Ky.	2,211,000	4,810,000	2,452,000	4,925,000	3,984,000
Okla., Kans.	1,154,000	1,821,000	881,000	1,420,000	1,801,000
Inland Texas	273,000	363,000	128,000	230,000	330,000
No. La.-Ark.	193,000	218,000	125,000	195,000	242,000
	3,831,000	7,212,000	3,586,000	6,770,000	6,357,000
Appalachian	268,000	318,000	312,000	360,000	269,000
Rocky Mountain	215,000	227,000	266,000	255,000	215,000
East of California	16,339,000	28,158,000	13,784,000	29,685,000	25,266,000
California	9,560,000	9,980,000	9,302,000	9,815,000	10,074,000
Total United States	25,899,000	38,138,000	23,086,000	39,500,000	35,340,000

APPENDIX 4
Inventories of Residual Fuel Oil
(Barrels of 42 Gallons)

DISTRICT	March 31, 1939 U.S.B.of M.	Sept. 30, 1939 U.S.B.of M.	March 31, 1940 U.S.B.of M.	July 31, 1940 Estimated	July 31, 1939 U.S.B.of M.
East Coast	6,783,000	10,204,000	8,242,000	10,925,000	9,919,000
Louisiana Gulf	918,000	2,373,000	1,084,000	1,550,000	1,891,000
Texas Gulf	5,087,000	8,372,000	6,072,000	6,950,000	7,643,000
	12,788,000	20,949,000	15,398,000	19,425,000	19,453,000
Ind., Ill., Ky.	2,761,000	2,903,000	3,404,000	3,600,000	2,968,000
Okla., Kans.	3,350,000	3,285,000	2,053,000	2,125,000	3,349,000
Inland Texas	2,003,000	2,460,000	1,776,000	1,675,000	2,365,000
No. La.-Ark.	514,000	605,000	356,000	400,000	612,000
	8,628,000	9,253,000	7,589,000	7,800,000	9,294,000
Appalachian	582,000	417,000	764,000	550,000	492,000
Rocky Mountain	616,000	602,000	645,000	600,000	645,000
East of California	22,614,000	31,221,000	24,396,000	28,375,000	29,884,000
California	86,294,000	82,927,000	78,440,000	77,925,000	85,655,000
Total of United States	108,908,000	114,148,000	102,836,000	106,300,000	115,539,000

MEN IN THE INDUSTRY'S NEWS

A. C. FULLER and S. W. Foster, both of Grandfalls, Texas, have been elected president and vice president, respectively, of Community Oil Company, a new concern that will operate in West Texas. Paul W. Klodt of Southgate, California, is secretary of the company, which has a capital stock of $15,000.

P. D. BOWLEN, head of Texas Canadian Oil Corporation, a Canadian concern with properties in the East Texas field, has been elected president of the Olivia Oil Corporation, which will have operating headquarters in the Blackstone building, Tyler, Texas. Paul D. Bowlen and W. A. Perryman, of Tyler, will be officials of the new concern.

GAIL F. MOULTON has resigned from the staff of Ralph E. Davis, Inc., to engage in independent consulting work. Pending the completion of scheduled work in Montana and Illinois, he will postpone making arrangements for opening an office but will make his headquarters at his home, Mountain Lakes, New Jersey.

H. J. LORENZ, petroleum engineer in charge of production activities of Buffalo Oil Company in the Mirando district, Southwest Texas, has resigned to engage in consulting work at Tulsa. He has been succeeded by Felix Gordon, former assistant, who is a graduate petroleum engineer of the University of Oklahoma.

I. H. McVICKER, North Texas district foreman for Stanolind Pipe Line Company with headquarters at Bowie station, has been assigned a larger district to include the K-M-A field, where the company is building facilities to connect with 5200 barrels of daily allowable production.

J. P. LEDFORD, Oklahoma City operator with a group of tests authorized for Wheeler County section of the Texas Panhandle, has organized the Ledford Oil Corporation. Texas headquarters are to be at Shamrock.

ALVIN BONEY, geologist for Sinclair-Prairie Oil Company, has been moved from Amarillo to Indiana on special assignment.

WILLS M. DECKER, engineer for Cities Service Oil Company, has been transferred from Hattiesburg, Mississippi, to Columbus, Texas.

L. C. STEDMAN, East Texas scout for The Pure Oil Company with headquarters at Tyler, is vacationing with his family in Kentucky.

W. D. HENDERSON, geologist for Deep Rock Oil Corporation, has been transferred from Tulsa to Wichita.

L. L. DAVIS, formerly stationed at Shawnee, Oklahoma, has been appointed district manager at the Ardmore office for Oklahoma Natural Gas Company.

KARL A. MYGDAL, district geologist for The Pure Oil Company in North Texas, has been transferred from Wichita Falls to the Fort Worth division office, where he will have jurisdiction over North and West Central Texas districts.

R. S. McCULLY, 58, member of the geological engineering department of Stanolind Oil & Gas Company, Tulsa, died August 20.

CECIL M. HACKLER, production department employe of The Pure Oil Company in the Fort Worth division, has been assigned to scouting duty in Southwest Texas with headquarters at San Antonio.

MELVIN CAMPBELL, Mississippi land man for Sun Oil Company with headquarters at Jackson, is vacationing with his family in South Texas.

J. M. LILLIGREN, superintendent for Sinclair Prairie Oil Company, has been transferred from Covington, Oklahoma, to Parkersburg, West Virginia.

RAYMOND RICE, engineer for The Texas Company, has been transferred from Tulsa to Seminole.

WORTH B. ANDREWS, SR., and Worth B. Andrews, Jr., Fort Worth operators, have returned from a two-week inspection trip of South Texas properties.

DICK NEWTON, geological division of The Carter Oil Company, Tulsa, has been temporarily transferred to the scouting division.

R. E. McPHAIL, geologist for Phillips Petroleum Company, has been transferred from Wichita Falls to Corpus Christi.

CECIL L. HIGHTOWER, safety director for United Gas Pipe Line Company, Dallas, has been appointed special agent of the National Committee for Conservation of Man Power in Defense Industries to serve in region seven.

LLOYD NOBLE, president of Noble Drilling Company, Ardmore, Oklahoma, has been named to the Oklahoma executive committee promoting the candidacy of Wendell Willkie.

DORSEY STRAITIFF, president of Rocky Mountain Drilling Company, has returned to his Los Angeles base after visiting Rocky Mountain operations.

W. B. MURRAY, of Western Oil Corporation, Portland, Oregon, was in Wyoming last week to arrange for drilling a test on the Dakota High structure south of the Lance Creek field.

CHARLES A. McCULLOCH last week was named to the executive committee of The Texas Corporation, filling a vacancy caused by the resignation of Torkild Rieber as chairman of the company, member of the executive committee and as a director. C. E. Olmstead, vice president, was named to the directorate. W. S. S. Rodgers, president of The Texas Company, will assume the duties of board chairman of the corporation in addition to his present duties.

ROBERT SUTTON, landman for Indian Territory Illuminating Oil Company at Wichita, has been promoted to superintendent of the land department and transferred to the Bartlesville office.

JOSEPH T. KING, 59, president of Kingwood Oil Company, Effingham, Illinois, died August 21 in Rochester, Minnesota. Born August 31, 1881, in Duke Center, Pennsylvania, King originally entered the oil business in 1905 when he became driller for Smith & McCormick, of Bartlesville, Oklahoma. He moved to Okmulgee in 1908 and formed a drilling partnership with Mose Carr, later joining with his brother, Frank King, with whom he worked until 1915, when King and W. E. Wood formed Kingwood Oil Company.

T. S. MAFFITT, SR., 64, chairman of the executive committee and member of the board of Houston Oil Company of Texas, and Houston Pipe Line Company, died August 16 at Estes Park, Colorado, following a heart attack. Elected a director of the oil company in 1917 and a director of the pipe line company since its organization in 1925, he served as chairman of the executive committees of the companies since 1928.

R. D. ROBEY, JR., 38, president of Robey Drilling Company, Tulsa, was instantly killed August 19 when his automobile crashed head-on with a truck near Mt. Vernon, Illinois. He was supervising drilling activities in the Salem field. He became associated with Olson Drilling Company and in 1933 made vice president of the firm, a position he held until 1936 when he organized Robey Drilling Company.

FORREST SEMKE, 23, petroleum engineering graduate of Oklahoma University and an employe of The Texas Company, was fatally injured when a timber fell from a derrick in the Crescent oil field of Logan County, Oklahoma. He died later at a Guthrie hospital.

GEORGE CAPPS and **ORVILL GEE,** pipe line workmen for Lone Star Gas Company and residents of Petrolia, Texas, were killed August 21 when an explosion occurred on the company's Panhandle natural gas trunk line near Wichita Falls. The men were repairing a leak at the time of the accident.

C. C. CHAMBERS, 56, district pipe line foreman for Gulf Refining Company with headquarters at Roscoe, Texas, died August 22 following an operation. He began working for the company in 1908, and later saw service in Mexico.

LAWRENCE L. LOCHAUSEN, 38, West Texas operator and a resident of El Paso, was fatally injured August 18 when struck by an auto near Wink, Texas.

PAUL POTTER, chief scout for Shell Oil Company at Tulsa, resumed his duties last week after touring scout checks in Oklahoma, North Texas, Texas Panhandle and Kansas fields. James Dwin, assistant chief scout, left on his vacation on Potter's return.

HIGH-SPEED DRILLING ... *with Safety!*

"OILWELL" Rotary Drilling Units give you all the power and speed you need for high-speed drilling — *without sacrifice of safety*. The compact, fully-guarded, direct drive from the engine gear box to the rotary presents no hazard to the crew. Quiet operation makes the derrick floor a safer place to work; improves the alertness and efficiency of the men on the rig.

Other advantages:

- ★ Eliminates wear and replacement of rotary chain and sprockets.
- ★ Reduces wear-and-tear on the rotary, hoist and hoisting engine.
- ★ Saves valuable space on the derrick floor.
- ★ Saves fuel, feedwater and lubricating oil.
- ★ Permits rotating to prevent sticking of the drill pipe in case of failure of the hoist or hoisting engine.
- ★ Provides an auxiliary prime mover for emergency hoisting.
- ★ Saves time in breaking-out drill pipe.
- ★ Provides an effective means for "drilling up."
- ★ Gives the driller better control of the drill pipe and bit.
- ★ Reduces the danger of "twist-off."
- ★ Is portable and is easily installed.

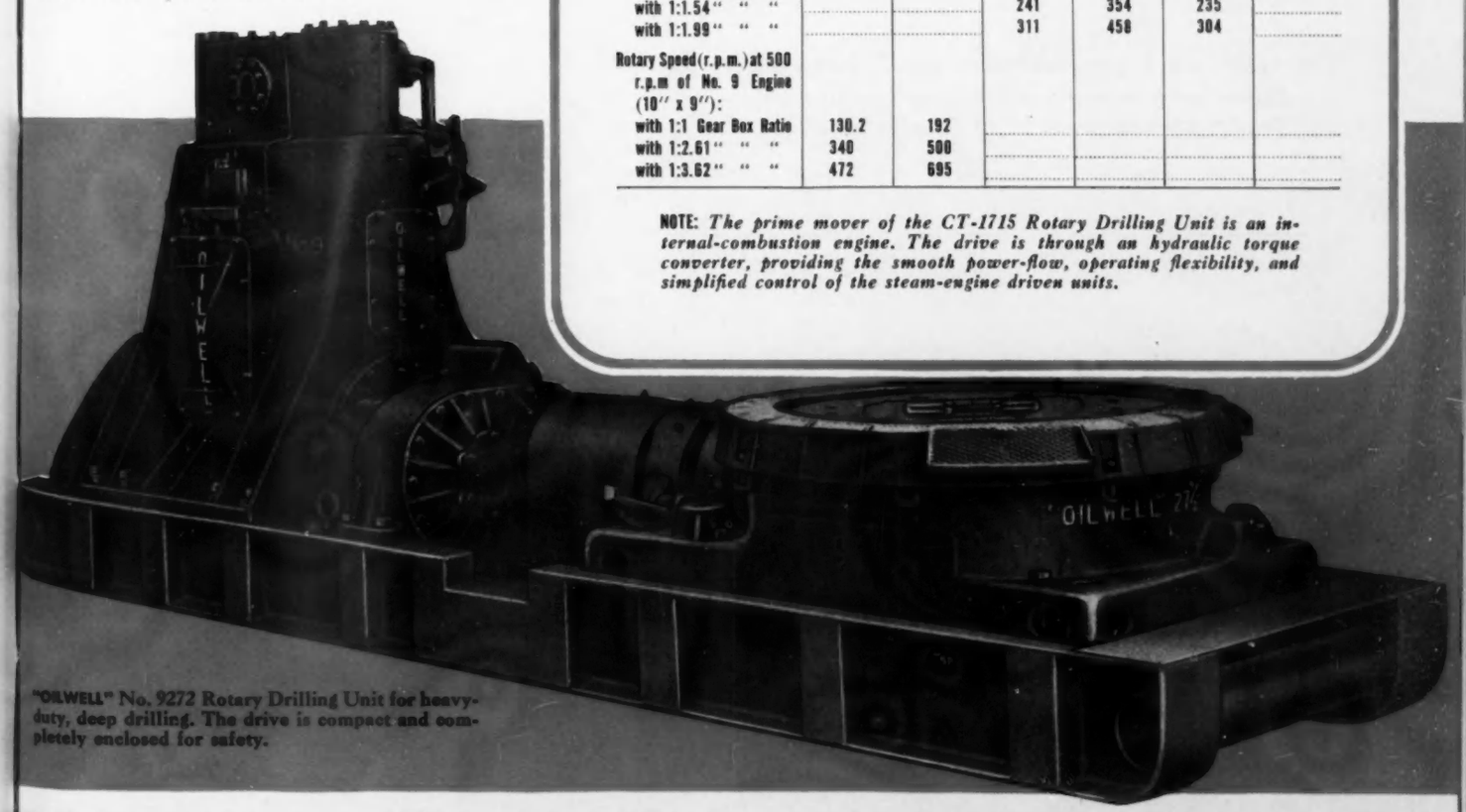
Combine these features of "Oilwell" Rotary Drilling Units and the result is *safer, faster, straighter, more economical* drilling. Ask for descriptive information.

"OILWELL" ROTARY DRILLING UNITS

SIZES AND SPEED RATIOS

	No. 9272	No. 9212	No. 72715 No. 7272	No. 7212	No. 71715 No. 7172	No. CT-1715
Engine (Vertical, Twin-Cylinder, Steam)	10" x 9"	10" x 9"	7¾" x 7"	7¾" x 7"	7¾" x 7"	(See Note)
Rotary (High-speed, Oilbath)	27½"	21" ("Super-Speed")	27½"	21" ("Super-Speed")	17½"	17½"
Speed Ratio of Rotary . . .	3.84:1	2.61:1	3.84:1	2.61:1	3.93:1	3.93:1
Speed Ratio of Engine Gear Box	1:1 & 1:2.61 or 1:1 & 1:3.62	1:1 & 1:2.61 or 1:1 & 1:3.62	1:1 & 1:1.54 or 1:1 & 1:1.99	1:1 & 1:1.54 or 1:1 & 1:1.99	1:1 & 1:1.54 or 1:1 & 1:1.99	1:1.44
Rotary Speed (r.p.m.) at 600 r.p.m. of No. 7 Engine (7¾" x 7"):						
with 1:1 Gear Box Ratio	.....	.....	156	230	153	.....
with 1:1.54" " "	.....	.....	241	354	235	.....
with 1:1.99" " "	.....	.....	311	458	304	.....
Rotary Speed (r.p.m.) at 500 r.p.m of No. 9 Engine (10" x 9"):						
with 1:1 Gear Box Ratio	130.2	192	.....	.....	.....	.....
with 1:2.61" " "	340	500	.....	.....	.....	.....
with 1:3.62" " "	472	695	.....	.....	.....	.....

NOTE: ***The prime mover of the CT-1715 Rotary Drilling Unit is an internal-combustion engine. The drive is through an hydraulic torque converter, providing the smooth power-flow, operating flexibility, and simplified control of the steam-engine driven units.***



"OILWELL" No. 9272 Rotary Drilling Unit for heavy-duty, deep drilling. The drive is compact and completely enclosed for safety.

OIL WELL SUPPLY COMPANY

Branch Stores in all Oil Fields
United States Steel Corporation Subsidiary

Industry Further Improves Statistical Situation

Continued improvement of the industry's statistical situation was indicated by the latest figures on operations, covering the week ended August 17.

Production of crude oil increased 40,000 barrels over the previous week's daily average, in amounting to 3,518,750 barrels daily, but still was 140,000 barrels under market demand, as estimated by the United States Bureau of Mines.

Crude runs to stills were stepped up 75,000 barrels to 3,510,000 daily, but exceeded only by 1 percent the refinery throughput in the corresponding week last year.

The larger crude runs resulted in production of 319,000 barrels more gasoline than in the previous week. But consumption of that product was seasonally large, and the markets absorbed all the current output plus 1,674,000 barrels from storage. Nevertheless, the 86,441,000 barrels left on hand represented a supply of 11,500,000 barrels, or 15.5 percent, greater than that held at the corresponding time last year.

All the gain in gasoline stocks since a year ago constitutes an unneeded supply, and apparently, the inventory will be 12,000,000 to 15,000,000 barrels in excess of necessary working stocks when the summer season ends September 30. Economists have estimated that 65,000,000 barrels would be adequate at that time. But withdrawals averaging 1,500,000 barrels weekly henceforth would leave 77,500,000 barrels on hand September 30, while withdrawals of 1,000,000 barrels weekly would leave 80,000,000 barrels.

In the industry's favor has been the experience with regard to stocks of light fuel oil. Satisfactory results have been obtained in building up the inventory of that product, to take care of the expected large demand in the fall and winter. Following steady additions previously, the stocks of gas oil and distillate fuel were increased 1,492,000 barrels in the week ended August 17, to 42,869,000 barrels. That quantity was 6,000,000 barrels, or 17 percent, greater than the 36,594,000 barrels in storage at the corresponding time last year.

In view of the scarcity of heating oil that developed last winter, the industry has been taking precautions against a shortage in the coming winter, and apparently will succeed. It has been estimated that 48,000,000 barrels of light fuel oil in the tanks September 30 would provide an adequate reserve for supplementing fall and winter production. To reach that level, the stocks would have to be increased 5,000,000 barrels between now and then, and that addition could be made through accumulations averaging a little less than 1,000,000 barrels weekly.

That such a 5,000,000 barrel addition between August 17 and September 30 would be feasible is indicated by the fact 3,000,000 barrels were added to storage in the corresponding weeks of 1938. Only a small addition was made in the similar period of 1939, but at that time the extraordinary situation of the Mid-Continent oil field shutdowns prevailed.

In making relatively large quantities of heating oil in the week of August 17, the refiners also produced a relatively large amount of heavy fuel oil, and 334,000 barrels of that product went into storage, which rose to 107,935,000 barrels for the country as a whole.

Crude oil stocks were lowered from 264,297,000 to 263,607,000 barrels in the week ended August 10, the Bureau of Mines reported. The latter figure compared with 267,536,000 barrels for the corresponding date last year.

Illinois Crude Increase Reflects Firm Markets

Crude oil commanded a lion's share of attention in the industry's markets the past week, as a 10-cent advance in the posting for Illinois crude appeared to herald a strengthening of the markets for both crude and refined oils everywhere east of the Rockies.

The price increase in Illinois resulted from the sharp decline of production in that state in the past six weeks, which has left output short of the requirements of companies that had come to depend on the Illinois oil for their Middle Western refineries.

The purchasers consequently have had to fall back on old sources in Kansas, Oklahoma, and North Texas, for increased supplies, and the bidding for well connections in those states naturally has strengthened the crude markets in those areas.

Furthermore, the Mid-Continent states for several months have been maintaining exceptionally strict allowables, and through that curtailment have bolstered their crude markets.

The combination of the Illinois production decline and the strict allowables of the prorated states has been especially invigorating for the markets, and lately still another development has occurred which has had a constructive market influence. It has been the decline of tanker rates between the Gulf and the North Atlantic ports. Those rates have descended to comparatively low levels, and prices of crude and of products delivered in the Northeastern areas have come down correspondingly, with a stimulating effect on demand.

Some Illinois crude formerly was moving into Canada and to the Atlantic seaboard, in successful competition with oil from the Southwest, and the high tanker rates that prevailed until some weeks ago encouraged such movement of Illinois oil. Conversely, the decline of the rates for shipment by water has

Trends of Operations and Changes in Stocks

Figures are from American Petroleum Institute weekly reports, except those on crude stocks, which are from Bureau of Mines weekly reports

WEEK ENDED	Crude Oil Production (Barrels Daily)	Crude Runs to Stills (Barrels Daily)	Crude Oil Stocks (Barrels)	Gasoline Stocks (Barrels)	FUEL OIL STOCKS	
					Gas Oil & Dist. Fuels	Residual Fuel Oil
1938:						
November 12	3,243,250	3,180,000	273,394,000	[6]67,551,000	34,175,000	120,491,000
December 10	3,245,100	3,150,000	[6]269,509,000	68,687,000	32,068,000	118,711,000
1939:						
April 22	3,526,700	3,280,000	277,156,000	[2]87,769,000	21,085,000	105,035,000
April 29	3,568,200	3,405,000	278,440,000	86,794,000	[7]25,844,000	[7]108,409,000
May 6	3,580,900	3,275,000	[2]278,607,000	86,216,000	26,167,000	108,597,000
July 29	3,539,100	3,460,000	268,513,000	77,887,000	34,900,000	114,053,000
August 5	[1]3,909,400	3,445,000	268,982,000	76,431,000	35,601,000	114,512,000
August 26	[1]1,690,800	3,475,000	246,982,000	73,475,000	37,722,000	116,237,000
September 30	3,658,200	3,560,000	233,023,000	71,168,000	38,081,000	115,466,000
October 7	3,435,850	3,505,000	231,564,000	[6]71,152,000	38,549,000	114,397,000
October 21	3,771,550	[2]3,650,000	[2]229,127,000	72,122,000	39,358,000	115,060,000
October 28	3,498,500	3,520,000	230,453,000	72,660,000	39,562,000	114,786,000
November 25	3,818,100	3,510,000	231,811,000	75,595,000	38,527,000	112,106,000
December 30	3,545,000	3,445,000	237,742,000	80,985,000	34,184,000	106,680,000
1940:						
January 27	3,611,600	3,470,000	237,339,000	87,914,000	27,407,000	103,015,000
February 24	3,732,100	3,490,000	240,836,000	96,719,000	25,390,000	103,419,000
March 30	3,841,250	3,585,000	250,561,000	101,370,000	23,778,000	105,081,000
April 20	3,858,550	3,535,000	254,881,000	[1]102,817,000	24,779,000	103,323,000
April 27	3,845,250	3,555,000	256,670,000	102,452,000	24,997,000	102,552,000
May 25	3,835,650	3,580,000	259,330,000	100,297,000	28,356,000	104,015,000
June 22	3,846,450	[3]3,690,000	260,891,000	97,276,000	32,751,000	104,683,000
June 29	3,639,550	3,625,000	262,059,000	95,142,000	33,590,000	104,486,000
July 6	3,602,400	3,575,000	261,732,000	93,275,000	34,730,000	105,343,000
July 13	3,560,750	3,565,000	261,494,000	92,372,000	36,221,000	105,710,000
July 20	3,580,350	3,540,000	261,598,000	91,789,000	37,504,000	105,864,000
July 27	3,690,400	3,555,000	262,579,000	90,173,000	38,981,000	105,924,000
August 3	3,493,550	3,510,000	264,297,000	89,492,000	40,448,000	106,919,000
August 10	3,475,300	3,435,000	263,607,000	88,115,000	41,377,000	107,601,000
August 17, 1940	3,518,750	3,510,000	.....	86,441,000	42,869,000	107,935,000
August 17, 1939	[8]2,480,550	[8]3,472,000	[4]267,536,000	74,822,000	36,594,000	115,580,000
Change in past year	[9]+41.9%	+1.1%	—1.5%	+15.5%	+17.2%	—6.6%

[1] All time peak. [2] Peak for year. [3] Lowest since April, 1922. [4] Stocks, August 12, 1939.
[5] Lowest since October, 1922, due to shutdown of six Mid-Continent States. [6] Lowest for year.
[7] Prior to April 29, 1939, data did not include stocks at terminals, in transit, etc., except in California.
[8] August, 1939, daily average. [9] Mid-Continent production partially shut in by State orders in latter half of August, 1939.

An early form of Alexander Graham Bell's telephone with automatic hook-switch and other clumsy attachments.

The simplified, streamlined 'phone of 1940

Continuous Improvement

MEANS ECONOMY VIA SIMPLICITY

Gray Systems of Well Control were pioneered and developed to provide complete control during the entire sequence of operations from drilling, through production, inclusive. Gray's policy of continuous improvement has meant continuously better, more flexible, **simpler** systems of well control.

Simplicity in the design of Gray products has fused quality with economy, and the use of fewer "gadgets" means less parts to go wrong. Simplicity leads to better designing, better material, greater skill in manufacture of the essential mechanism. This simple formula makes for long-range economy.

GRAY
TOOL COMPANY

H O U S T O N

***West Coast Distributors:* WAGNER-MOREHOUSE, INC., Los Angeles**

Wholesale Prices of Refined Products

REFINED GASOLINE (Cents a gal.)	Range Last Week	Late Last Week	Changes from week Before	
Oklahoma Refineries:				
60 Octane and under	3⅞	4¼	...	...
63-66 Octane	4¼	4¾	...	...
72-74 Octane	4⅝	5¼	...	...
Mid-Western Tank Car:				
60 Octane and under	3⅞	4¼	...	...
63-66 Octane	4¼	4¾	...	...
72-74 Octane	4⅝	5¼	...	...
New York Harbor:				
70 Octane and under	5¼	6	—¼	...
72-74 Octane	5½	6½	...	—¼
NATURAL GASOLINE				
Grade 26-70:				
F.O.B. Group 3	1½	1½	...	...
F.O.B. Breckenridge, Texas	1¼	1¼	...	...
KEROSENE				
Oklahoma Refineries:				
41-43 water white	3⅞	4¼	...	...
42-44 water white	4	4⅝	...	...
Mid-Western Tank Car:				
41-43 water white	3⅞	4¼	...	...
42-44 water white	4	4⅝	...	...
New York Harbor	4⅝	4⅝	—⅜	—⅜
RANGE OIL				
At Oklahoma Refineries	3½	3⅞	...	...
In Mid-Western Market, Group 3 basis	3½	3⅞	...	...
LIGHT FUEL OILS				
Oklahoma Refineries:				
No. 1 straw	3¼	3½	...	...
No. 3	3⅛	3⅜	...	...
Mid-Western Tank Car:				
No. 1 white	3⅜	3⅝	...	...
No. 3	3⅛	3⅜	...	...
New York Harbor:				
No. 1	4⅜	4⅝	—⅜	—⅜
No. 3	4⅛	4⅛	—¼	—¼

HEAVY FUEL OILS (Per Bbl.)	Range Last Week	Late Last Week	Changes from week Before	
Oklahoma Refineries:				
No. 6	$0.55	$0.55	...	...
Mid-Western Tank Car:				
No. 5	.75	.75	...	...
No. 6	.50	.55	...	...
New York Harbor:				
No. 5	1.45	1.70	...	...
No. 6	1.15	1.25	...	...
BUNKER C FUEL OIL (Per barrel, ships bunkers)				
Gulf Coast	$ .80	$ .90	...	...
New York Harbor	1.15	1.25	...	...
DIESEL OIL (Per barrel, ships bunkers)				
Gulf Coast	$1.50	$1.70	...	...
New York Harbor	1.70	1.70	—.10	—.15
Los Angeles Basin, 27 gravity	1.20	1.40	+.05	...
LUBRICATING OIL (Cents a gal.)				
Oklahoma Refineries:				
Bright Stock, 150-160 viscosity at 210°, 10-25 pour test	13½	15½	...	...
Neutral oil, pale No. 3 color, 150 viscosity at 100°, 0-10 pour test	8	10¼	...	...
Western Pennsylvania:				
Bright stock, 145-166 viscosity, at 210°, 25 pour test	12	13	...	...
Neutral Oil No. 3 color, 150 viscosity at 70°, 25 pour test	...	...	...	...

discouraged the movement of Illinois crude into the areas formerly served most economically by boat shipments from the Gulf.

The Texas Company and Sohio Corporation, subsidiary of Standard Oil Company of Ohio, on August 20 made announcements that they would begin paying $1.15 a barrel August 21 for Illinois crude; and Sohio also posted that price for Griffin crude, of southern Illinois and Indiana. The former posting for those oils was $1.05. The Ohio Oil Company, Carter Oil Company, Pure Oil Company, Magnolia Petroleum Company, and Gulf Oil Corporation also advanced their Illinois prices from $1.05 to $1.15 a barrel. Mohawk oil lines increased light Illinois crude from $1.05 to $1.15 a barrel and heavy Illinois oil from 95 cents to $1.05 a barrel. The 10-cent increase in Illinois crude was the first major price change in the state since June, 1939, although Sohio Corporation several weeks ago boosted its price for Wabash Valley crude from $1 to $1.05.

Along with the increases in Illinois, Sohio Corporation and Ashland Oil & Transportation Company August 21 advanced Kentucky crude prices 10 cents a barrel. Sohio raised Birk City and Corydon, Kentucky, crudes from 95 cents to $1.05 a barrel. Ashland increased Big Sandy River crude from 92 cents to $1.02 and Kentucky River crude from $1.10 to $1.20.

The Ohio Oil Company, effective August 23, increased its posted price for Eastern Illinois and Western Indiana crude oil 5 cents a barrel to $1.

The developments in Illinois already have had an appreciable effect on crude oil movements in the Mid-Continent, having caused several purchasers to increase takings in Oklahoma and North Texas. One company alone now is substituting 35,000 barrels daily of Oklahoma crude for Illinois oil, having stepped up such runs 5000 barrels within the past 10 days. Consequently, that concern is not left with a great deal of crude receipts that can be moved south from Oklahoma to Texas through its pipe line system.

The principal changes last week in prices of refined products were reductions along the Atlantic seaboard, which affected most products, and which were based mainly on the recent reductions in tanker rates between the Gulf and the East Coast. In the primary markets of the Mid-Continent and Gulf Coast, product prices were generally unchanged.

United States Crude Oil Production Down 20,850 Barrels

Estimates Compiled by THE OIL WEEKLY

DISTRICT OR STATE	Bureau of Mines Estimate of Daily Demand in August	State Allowable in August	BARRELS DAILY FOR WEEK ENDED August 17	August 24
TEXAS—				
Texas Panhandle	.....	.....	65,550	67,675
North Texas	.....	.....	91,900	93,125
West Central Texas	.....	.....	28,100	28,550
West Texas	.....	.....	193,800	194,950
East Central Texas	.....	.....	71,725	71,275
East Texas Field	.....	.....	374,950	374,900
South Texas	.....	.....	178,900	181,100
Texas Gulf Coast	.....	.....	185,750	187,475
Total Texas	1,326,400	1,194,943*	1,190,675	1,199,050
CALIFORNIA—				
Long Beach	.....	.....	44,500	42,500
Midway-Sunset	.....	.....	58,800	43,000
Kettleman Hills	.....	.....	47,000	47,200
Wilmington	.....	.....	84,400	85,300
Others	.....	.....	399,000	398,000
Total California	598,400	587,000†	633,700	616,300
OKLAHOMA—				
Oklahoma City	.....	.....	96,850	97,600
Seminole Area	.....	.....	101,500	102,000
Others	.....	.....	204,125	207,700
Total Oklahoma	402,600	390,000	402,475	407,300
ILLINOIS—				
Salem	.....	.....	170,900	166,500
Louden	.....	.....	77,100	76,200
Centralia	.....	.....	36,500	31,300
Other New Pools	.....	.....	96,500	96,800
Old Pools	.....	.....	10,450	10,500
Total Illinois	440,600	.....	391,950	381,300

DISTRICT OR STATE	Bureau of Mines Estimate of Daily Demand in August	State Allowable in August	BARRELS DAILY FOR WEEK ENDED August 17	August 24
LOUISIANA—				
North Louisiana	.....	59,857	64,950	65,100
South Louisiana	.....	214,763	214,800	208,650
Total Louisiana	276,100	274,620	279,750	273,750
KANSAS	166,800	170,607	187,000	181,800
NEW MEXICO	105,200	102,000	102,500	102,050
EASTERN STATES—				
Pennsylvania Grade	57,000	.....	70,800	70,700
Others, Eastern	35,900	.....	19,900	19,800
Total Eastern States	92,900	.....	90,700	90,500
MOUNTAIN STATES—				
Wyoming	81,300	.....	72,750	73,500
Montana	20,600	.....	18,350	18,200
Colorado	4,200	.....	3,625	3,600
Total Mountain States	106,100	.....	94,725	95,300
MICHIGAN	57,100	52,000§	54,300	54,200
ARKANSAS	65,200	73,000	72,800	73,925
INDIANA	10,000	.....	14,750	14,500
MISSISSIPPI	10,300	.....	15,700	20,250
NEBRASKA	.....	.....	150	300
‡Total 8 Prorated States	2,997,800	2,844,170	2,923,200	2,908,175
Total United States	3,657,700	.....	3,531,175	3,510,325

* Net daily average for 31 days as of August 1, considering general shutdowns on August 1, 4, 8, 11, 15, 22, 25, and 30.
† Recommendation of Central Committee of California Oil Producers.
§ Department of Conservation estimate of actual production.
‡ Texas, California, Oklahoma, Louisiana, Kansas, Arkansas, Michigan, New Mexico.

Repeat Orders *prove* it's better CASING

WHEN a manufacturer offers more than one grade of the same product, the "de-luxe" line, in order to sell, has to incorporate *proportionately more additional value* than its relatively small premium price indicates. And so it is that *Pittsburgh Special* Acme-Thread Casing includes every desirable feature that advanced engineering design can give it, regardless.

Proof of its exceptional value lies not in the fact that it sells well originally—BUT THAT IT REPEATS CONSISTENTLY!

Once they have tried *Pittsburgh Special* Acme-Thread Casing, dollar-wise operators know that getting to bottom QUICKER is a sure thing . . . and getting there SAFELY is almost a certainty. For the fast stabbing, spinning and running features of *Pittsburgh Special* are made possible by six-pitch Acme type threads and a thin-wall alloy-steel extra-clearance coupling. And maximum safety results from an auxiliary shoulder seal that reinforces the last engaged thread. Don't take costly chances when *Pittsburgh Special* is available at moderate extra cost. Write today for Bulletin No. 310.

PITTSBURGH STEEL CO., PITTSBURGH, PA.

NEW YORK CLEVELAND DETROIT CHICAGO
TULSA HOUSTON LOS ANGELES

Pipe Storage Yards: Memphis, Tenn. . . . Houston, Texas . . . E. San Pedro, Calif.
Export Distributors: Lucey Export Corporation . . . New York, N. Y., U. S. A.

HYDROSTATIC TENSION TESTING

A BONUS VALUE! —Pittsburgh Steel Company's exclusive Hydrostatic Tension Test, the only mill test that matches field conditions, is applied to every length of *Pittsburgh Special* and *Pittsburgh* Regular A.P.I. Casing.

Pittsburgh S

WORLD-WIDE DEVELOPMENTS

By WM. V. GROSS, Associate Editor

War

Limit Automobile Gasoline in France and Spain

Unless one is a French evacuee returning to Nazi-occupied northern France, one is not apt to be able to obtain regular gasoline for use in a private automobile for purposes of ordinary travel.

The order now has gone out that automobiles in France are to be allowed to use synthetic gasoline only, and it is understood that this rule applies also in Spain where the German political, and commercial influence is strong.

Opinion has been expressed in some quarters that putting French and Spanish automobiles on a synthetic gasoline diet means that that product is not turning out to be as suitable for aerial fighting as it was hoped it would be.

Intensified Warfare Expected to Bring Bulgaria Shortage

Bulgaria probably will suffer an acute shortage of petroleum supplies if the planned invasion of England by German land forces ever becomes a reality.

A study of Bulgarian imports during 1939 reveals that country bought 821,000 barrels of petroleum and petroleum products, of which 607,000 barrels came from Rumania, whose crude and refined output now is at the beck and call of Germany. Of the remainder, 157,000 barrels of various petroleum products came from Germany. All available German and Rumanian production hitherto sent to Bulgaria presumably would be required for mechanized war units in a wholesale invasion of England.

Report Mining of Fields and Oil Terminals

Press dispatches from Batavia, Java, declare that certain key oil fields of Netherlands Indies have been mined to keep them from falling into enemy hands in the event of an invasion by Japanese or German fighting forces. Important oil terminal harbors also are said to have been mined.

U. S. S. R.

Drilling Down to Half of Government-Set Quota

Preliminary figures on Russian drilling during the early part of 1940 indicate wells are being completed less than one-half as rapidly as called for by the Moscow-set quota.

Industria, a Moscow newspaper, recently printed figures showing that the more important oil districts were not quite halfway meeting their quotas.

The oil administration in Moscow has told drilling and production engineers that 2135 wells must be completed during 1940. These new completions are to be distributed as follows: 692 for the 11 oil trusts comprising the Azerbaijan district, 250 for the 4 oil trusts comprising the Grozny district, 226 for the Maikop district, 33 for the Georgian district, 20 for the Daghestan district, 20 for the Burguruslan district, 133 for Bashkir, 29 for Syzran, 14 for Tuimaz, 43 for Prikama, 279 for the Emba district, 29 for Aktyubinsk, 92 for Central Asia, and 201 for the Ukrainian oil combine.

Mexico

Set Value of Expropriated Properties at $34,545,531

Mexican producing and refining properties of foreign oil firms expropriated by presidential decree were valued at 172,727,657 pesos, or $34,545,531, in the report of a government-appointed appraisal engineer issued August 20.

The figure was about $800,000 higher than a second estimate tendered the district court in Mexico City. The second estimate, prepared by an appraiser appointed by the government to represent the companies, valued the properties at 169,070,439 pesos, or $33,814,087.

A partial breakdown on valuation of expropriated properties of various foreign concerns operating in Mexico normally before expropriation (figures in pesos) follows:

El Aguila (British- and Dutch-owned), 137,339,902; Huasteca Petroleum Company (Standard Oil Company of New Jersey) 25,055,233 pesos; Standard Oil Company of California companies, 4,732,330; Imperio (Cities Service), 1,854,561; Continental Oil Company group, 356,017; Sabalo group of transportation and equipment companies, 1,063,399.

The government has announced that the above figures did not take into consideration oil in place or real estate. The government alleges it already had title to oil in the ground, and states that the real estate properties will be evaluated at the figure at which it was returned for taxation. Ordinarily, this would mean the properties will be valued at a fraction of their values.

The companies have refused to take part in any of the valuation proceedings, feeling that to do so might be construed as approval of, or resignation to action of the Mexican courts and labor boards in following a general course that has been detrimental in the main to the cause of the companies.

By September 20, a final set of estimates on values of the expropriated properties will be submitted to the Mexico City court by a third appraiser.

In connection with the foregoing appraisals, it may be pointed out August 21 that whereas Sinclair properties were valued at only $281,401, the government finally arrived at a settlement figure of $8,500,000.

Canada

Brazeau May Be New Field; Turner Valley Allowable Up

The Brazeau structure, west of Red Deer, in Central Alberta, loomed as the next West Canadian oil field when Home Oil Company's wildcat in Legal Subdivision 16, Section 7-43-17w5, blew in from a sand in the Blairmore at 8550 feet with an estimated 9,000,000 cubic feet of wet gas daily. Distillate tested 56-gravity.

The well was shut in pending arrival of pressure equipment. Electric log run previous to setting 4½-inch casing to bottom at 8700 feet indicated three promising zones between 8160 and 8550 feet. The two upper zones are to be tested before completion.

The Alberta Conservation Board last week increased the allowable of the Turner Valley field, Canada's major crude area, from 26,000 to 26,828 barrels a day. The schedule includes 116 wells, providing an average allowable of 231 barrels per well.

Eighteen new tests are scheduled to start drilling in Turner Valley before the year's end, in addition to 19 wells now underway, according to a survey of the Alberta Petroleum Association. Ten tests are planned for outside and wildcat structures, where six tests are currently active.

Oil Imports for Domestic Use Up Sharply

Figures indicate barrels and are from Bureau of Mines.

MONTH	Crude Oil	Refined Products	Total
January:			
Jan., 1939....	1,373,000	609,000	1,982,000
Jan., 1940....	1,664,000	1,321,000	2,985,000
Percent Change.	+21.2	+117.1	+52.0
February:			
Feb., 1939....	1,266,000	654,000	1,920,000
Feb., 1940....	2,343,000	2,731,000	5,074,000
Percent Change.	+85.0	+320.0	+164.0
March:			
Mar., 1939...	1,404,000	659,000	2,063,000
Mar., 1940...	2,895,000	3,410,000	6,305,000
Percent Change.	+106.2	+417.4	+205.6
April:			
April, 1939...	2,648,000	366,000	3,014,000
April, 1940...	3,041,000	1,948,000	4,989,000
Percent Change.	+14.8	+432.0	+65.5
May:			
May, 1939...	3,434,000	529,000	3,963,000
May, 1940...	3,921,000	934,000	4,855,000
Percent Change.	+14.2	+76.5	+22.5
June:			
June, 1939...	3,196,000	750,000	3,946,000
June, 1940...	3,488,000	2,056,000	5,544,000
Percent Change.	+9.1	+174.1	+40.5
1st 6 Months:			
1939.....	13,321,000	3,440,000	16,761,000
1940.....	17,352,000	12,400,000	29,752,000
Percent Change.	+30.3	+260.1	+77.6

U. S. FIELD OPERATIONS

Illinois

Jasper County Wildcat Promises 200-Barrel Well

Current field developments included near completion of a wildcat in northern Jasper County, Johnson Oil & Refining Company's Mendenhall 1, SW SW SE 17-8n-10e, estimated good for 200 barrels daily from McClosky at 2557-2607 feet after an acid treatment. Before acid it swabbed 65 barrels in 24 hours. At an elevation of 548 feet, it topped Glen Dean at 2070 feet and Cypress at 2212 feet.

The Carter Oil Company was testing R. G. Dagley 1, SW SW SW 11-7s-9e, White County wildcat, at 1505-1515 feet in Biehl sand. It was showing for a small producer.

In Marion County, a wildcat Devonian test, Ponting et al's Rohner 1, SW NW NE 31-2n-1e, set a squeeze job to shut out water after drilling plug to test a reported 8 feet of saturation. At an elevation of 491 feet, it found the Devonian at 3129 feet and was bottomed at 3194 feet. Benoist was topped at 1580 feet and Fredonia at 1810 feet.

Another Marion County wildcat, Kingwood Oil Company's Spencer 1, NW NW SW 19-3n-3e, six miles north of Salem, was drilling in a hard lime at 2477 feet and had found no shows. Glen Dean was topped at 1835 feet, and Aux Vases at 2255 feet.

In Jefferson County, Tex Harvey Oil Company's Green 1, SW SW SW 13-4s-1e, a wildcat, was plugged through the Fredonia at 3005 feet. Another wildcat in the county, The Carter Oil Company's Staley-Purcell 1, NW NW NE 27-1s-2e, 1½ miles south of the Dix field, was drilling below 600 feet. Cable tools have been moved on location at Roger C. Young's Whittington 2, near Ina, SE SE SW 30-4s-3e, where casing was cemented several weeks ago after recovery of saturation at 2648-56 feet following a plugback from 3480 feet.

Second completion in the new Bond County pool, six miles northeast of Greenville, National Petroleum Company's Spindler Investment Company 2, NW NW 10-6n-2w, pumped 208 barrels in 24 hours from Benoist sand at 1004-29 feet following a 20-quart shot. Magnolia Petroleum Company's first completion in the field, J. Elam 1, SW SW SW 3-6n-2w, pumped 160 barrels initially after shutting out water from 1040 feet.

A Coles County wildcat, The Carter Oil Company's Pinnell 1, CW½ SW SE 26-12n-7e, was to be abandoned at 2150 feet in the Fredonia. There is still but one producer in the county, a short distance south of the Pinnell venture.

In Perry County, Stanolind Oil & Gas Company's W. A. Kimzey 1, SE 4-5s-1w, was abandoned in the Devonian at about 3100 feet.

Superior Oil Company's deep test in the Albion field of Edwards County, Scott 1, SW SW NW 31-2s-11e, was drilling below 5130 feet after topping Devonian at 4951 feet. Elevation is 472 feet.

Tide Water Associated Oil Company's Seiler 1, NW NW 35-1s-13w, in the new field near Maud in Wabash County, northeast of Keensburg, flowed 1166 barrels in 24 hours from McClosky at 2609-20 feet, one of the best completions ever reported in the county. In the new Helm field, also in Wabash County, Longhorn Oil Company's Edith Helm 2-A, NW NW NE 23-3s-14w, flowed an estimated 40 barrels an hour after 4000 gallons of acid in the McClosky. It is a south offset to Helm 1, the discovery well.

Kentucky

Union County Wildcat Shuts Down Through Dry McClosky

In Union County, 1½ miles northeast of Uniontown, Benedum & Trees' Clements 1, NW NW SW 14-P-20, was shut down at 2645 feet through a dry McClosky, waiting on orders. The Cypress reportedly carried a slight show.

Other west Kentucky operations last week were confined to proven acreage.

Indiana

Gas Strike in Gibson County Precipitates Lease Play

Active lease play is under way in White River Township, Gibson County, centering about a gas discovery in the Hardinsburg sand at 1742 feet in R. L. Bauman's James E. Hall 1, NW NE NE 20-1s-11w, 3 miles west of Patoka. The test now is shut down for orders at 2360 feet, through a dry McClosky.

In northern Vanderburgh County, Scott Township, Burr Lambert set surface casing for Neiderhaus 1, SE NW 22-4s-10w, 2 miles due south of Illinois-Indiana Basin Corporation's Leo Boeglin 1, Gibson County, showing for a prospective Cypress sand producer.

L. L. Benoist's Dave Winchell 1, NW SW SE 7-7s-6w, in the Hatfield area of Spencer County, was abandoned at 1123 feet, through the Waltersburg.

In the Heusler Dome area of Marrs Township, Posey County, General Petroleum Corporation located Weldon-Strueh 1, Sun Oil Company farmout, CSW SE NE 1-7s-12w.

In Warrick County, a mile north of Yankeetown, Yankeetown Development Company's Taylor 1, SW SW NW 10-7s-8w, projected 4000-foot wildcat, spudded and shut down at 400 feet.

On the west side of the Griffin field, south of production, Continental Oil Company's Mumford Realty Company 1, Gibson County, NW NW NE 25-3s-14w, initialed 117 barrels in 24 hours from Waltersburg sand at 2084-2118 feet.

In the South Griffin field of north Posey County, J. M. Roberts' Keck 3, SW SE NW 34-3s-14w, was completed in the McClosky for an initial 650 barrels in 24 hours after 2500 gallons of acid, first McClosky producer in that immediate area. Other production is from the Cypress, Aux Vases and Tar Springs.

Forest City Basin

Nebraska Wildcat Provides Oil Well From Hunton Lime

Indian Territory Illuminating Oil Company's Schaible-Kuttler 1, CNE SW 29-3n-16e, 10 miles north of Falls City pool in Richardson County, Nebraska, opened Hunton lime production, pumping 375 barrels of 29-gravity crude in 30 hours, cutting 2 percent basic sediment, after acid treatment. On a later test, the discovery pumped 138 barrels in 9 hours with 2.2 percent water. Pay was logged at 2433-53 feet, and 7-inch casing cemented on top of Hunton lime. Acid used totaled 4500 gallons.

R. L. Campbell et al's Schock 1, SW SE NE 20-1n-16e, ½ mile east of Falls City pool, filled an undetermined amount with 33-gravity oil after acidizing Hunton lime at 2244-49 feet with 850 gallons in two stages. This is the highest-gravity crude yet encountered in the pool, others ranging from 29- to 31-gravity. Operators will deepen a few feet before testing.

Skelly Oil Company's Davidson 1, SW NW NE 20-1n-16e, topped Hunton lime at 2234 feet and drilled in 4 feet. It was waiting on cement. Some saturation was reported.

Water has been effectively shut off in the Falls City discovery, Pawnee Royalty Company's Boice 1, CNE NE 18-1n-16e, as operators reported the well as pumping 792 barrels of oil with only 2 percent water in 24 hours, averaging 33 barrels per hour. This well came in for a 100-barrel producer in the Hunton lime, but water encroached, prompting deepening to the Arbuckle lime which failed to show. Hunton lime was topped at 2276 feet and plug set 10 feet in the zone.

Black Gold Operating Company and Jock Garden et al's Ord 1, CNW NW 8-5n-14e, Nemaha County, topped Hunton lime at 2249 feet and cored dry lime at 2251-63 feet. It may be deepened to the Viola lime.

Kerlyn Oil Company plugged Hemphill 1, NEc NW 23-12s-20e, Leavenworth County, Kansas, at 1046 feet, after deepening from 700 feet.

Dan McLaughlin et al's Bower 1, SEc NE 5-10s-20e, in the McLouth area of Jefferson County, Kansas, became the third producer for the area after gauging 2,000,000 feet of gas daily. Plugs were drilled to 1428 feet in Bartlesville sand.

Oklahoma

Hunton Lime New Producing Horizon in Ramsey County

Mid-Continent Petroleum Corporation et al tested initial Hunton-lime production in Ramsey pool, Payne County, at Simpson 2, SWc 7-18n-2e, farthest north location in the pool. Drilled to 4882 feet in Wilcox sand, operators plugged back to 4774 feet and perforated casing in a new zone at 4677-84 feet with 48 shots, pay being topped at 4680 feet. On a 24-hour test, it pumped 94 barrels of 40.2-gravity oil and 283 barrels of water. Water decreased to 237 barrels, while oil was holding to approximately 80 to 90 barrels per day.

The Pure Oil Company's Park College 1 (200), SWc SE 27-5s-7e, a mile southeast of production on the Bryan County side of Cumberland pool, took drill-stem test at 5098 feet in lower Bromide sand with packer set at 5018 feet. Open one hour, the test showed 105 feet of oil-cut mud with no water or gas. Coring was resumed. Little 1 (101), NE SW SE 28-5s-7e, Marshall County, flowed 359 barrels of crude through 20/64-inch tubing choke in 24 hours. Pay is upper and lower Bromide sands at plug-back depth of 5087 feet. It is reported that Stanolind Oil & Gas Company may shortly start a test in the W½ 27-6s-8e, Bryan County, on a block assembled by George Deck. Acreage lies in Sections 21, 22, 27 and 28. Stewart 1 (103), CS½ SE NE 28-5s-7e, Bryan County, was officially completed for 597 barrels in 24 hours through a 15/64-inch tubing choke. Second Bromide, topped at 4891 feet, was penetrated to 5090 feet. Thomas 1 (102), SW NE NW 28-5s-7e, Marshall County, flowed 810 barrels in 24 hours on completion test through 9/64-inch tubing choke. Hole was drilled to 5162 feet and later plugged back to 5091 feet.

Prague pool, Lincoln and Pottawatomie counties, was extended with two new producers. Mid-States Oil Corporation's Provaznik 1, SWc 33-12n-6e, pumped 217 barrels of oil and 7 barrels of water in 24 hours after shooting Skinner sand at 3266-88 feet with 60 quarts. H. L. Berkey et al's Gregg 1, SEc 32-12n-6e, pumped 337 barrels of oil in 24 hours. Skinner sand, logged at 3259-83 feet, was squibbed with 40 quarts.

Gilcrease sand was proven commercially at the south end of the old Fish pool, Seminole and Hughes counties at Winona Oil & Gas Company's Meyers 1, SE SW NE 31-7n-8e, which, after perforating at 2892-2990 feet with 156 shots, tested 10 barrels hourly. Originally completed at 4247 feet in Wilcox sand, operators plugged back to 2990 feet. Cromwell production recently has been extended to the south, north and northwest.

Searight pool, Seminole County, was defined on the north at H. S. Moss et al's Gist 1, CS½ SE NE 27-10n-6e, abandoned in Hunton lime at 4286-4356 feet.

Burt Mullins extended McCracken pool, Wagoner County, ¾ mile southwest at Lyons 1, NW SE SE 20-18n-17e, completed for 25 barrels per day from shallow sand at 362-85 feet, shot with 40 quarts.

Vierson Oil & Gas Company's Bell 1, SWc NE 5-14n-5e, West Davenport discovery in Lincoln County, pumped 40 barrels of oil and 6 barrels of water from Prue sand, topped at 3400 feet. Plug was set at 3527 feet. Burke Greis Oil Corporation et al's Dew 1, NEc 9-12n-9e, Mason pool strike in Okfuskee County, perforated Hunton lime at 3895-3910 feet and acidized with 1500 gallons. While cleaning out, it flowed 20 barrels hourly with 10,000,000 cubic feet of gas.

Phillips Petroleum Company's Grape 1, CNW SE 30-18n-5w, Kingfisher County, topped second Wilcox at 7721 feet and made drill-stem test at 7831 feet with packer set at 7758 feet, recovered 35 stands of mud. At 7911 feet, operations stopped for an electric log and then shut down for orders. No shows were reported.

Benedum & Trees abandoned State 1, SW NW NW 13-21n-6e, northwest of Greenup pool, Pawnee County, at 3362 feet in Arbuckle lime. A small oil show was logged at 3060-71 feet in Wilcox.

Mohican Drilling Company's Boydstein 1, NWc NE 9-5s-9w, Cotton County, topped Arbuckle lime at 2363 feet and drilled to 2466 feet. Electric log revealed no shows, and hole was plugged.

Zephyr Drilling Company et al's Morrell 1, SWc SE 8-28n-4e, northeast of Mervine pool, Kay County, was abandoned in Mississippi at 3245 feet.

Two Hughes County wildcats were plugged. Kennith Ellison, Phillips Petroleum Company et al's Bird "A" 1, SE NE SE 4-9n-11e, a twin offset to a wildcat to the Wilcox sand in the old shallow Alabama pool, was dry in Wilcox at 3786-3826 feet. Scruggs Drilling Company et al's Hamilton 1, C SW SW 7-8n-11e, between Alabama and West Wetumka pools, logged dry Booch sand at 2255-85 feet and was abandoned at 2315 feet.

Kansas

New Oil Areas Indicated for Phillips and Stafford Counties

Cities Service Oil Company opened the second producing area for Phillips County, Northern Kansas, at Ray 1, NE NW SE 32-5-20w, 9 miles southeast of Van Patton pool, Norton County, and 15 miles west of Bow Creek pool, Phillips County. Reagan sand was perforated at 3540-53 feet, and hole immediately filled 2900 feet with 32-gravity oil. Total depth is 3603 feet in Arbuckle lime. Tubing and rods were run for a pumping potential. Consumers Cooperative Refining Company, Phillipsburg, is taking 3000 barrels daily from scattered pools in Rooks and Phillips counties, and is expected to connect with this new producing area.

Shell Oil Company opened a Stafford County area at Bean 1, SEc SW 21-23-12w, which filled 3600 feet with high-gravity crude when Arbuckle lime, topped at 3839 feet, was penetrated to 3852 feet. Hole was being deepened after cementing 4½-inch casing at 3840 feet. This strike is on a northeast-southwest structural trend between St. John and Richardson pools, 6 miles from each area.

Shell Oil Company and Atlantic Refining Company's Riley 1, SWc 28-23-11w, on a northwest-southeast structural trend between Zenith and Richardson pools, topped Arbuckle lime at 3772 feet and drilled in 10 feet without encountering a show.

Seaney, Clampitt & Carnihan may open a producing area in Stafford County at Boyd 1, CW½ SW SW 4-21-14w, 4 miles west and a mile south of Hiss pool, Southern Barton County. Arbuckle lime, drilled to 3645 feet, showed good saturation.

Three miles west of Brown pool, Cowley County, Ralph Wixon et al's Clover Ranch 1, CE½ 17-31-7e, averaged 15 barrels daily without acid from 2810 feet. W. M. McKnab et al's McKown 1, NEc SW 31-33-5e, northwest of Rahn pool, was abandoned at 3245 feet in Mississippi lime, topped at 3122 feet. A show of oil was logged, but a fishing job failed to come through.

A new gas area was opened in Douglas County at Buckley et al's Hubbard 1, SEc SW 11-12-21e, testing 1,500,000 cubic feet of gas per day before being shut in. Pay was drilled to 1327 feet. S. W. Forrester et al's Alternernd 1, CSL NW 35-12-20e, topped Mississippi lime at 1104 feet, filled with water at 1605 feet, and was shut down for orders.

Stanolind Oil & Gas Company will test Pennsylvanian shows at Judd 1, C SE SE 15-21-38w, deep wildcat in Kearney County, Western Kansas. Mississippi lime was topped at 4811 feet, Viola lime at 5425 feet, Arbuckle lime at 5555 feet, and Granite at 6065 feet. Hole was carried to 6071 feet, and plugged back to 5384 feet.

H. H. Royer, Duwe & Farris et al's Hutchins 1, CWL SW SE 29-21-8w, a mile southwest of Sterling and southwest of Wherry pool, Rice County, was abandoned at 3700 feet in Arbuckle lime. Hole was plugged back to 3319 feet, but shows in Sooy at 3285-92 feet and 3317-19 feet failed to produce.

Jocelyn, Murfin et al's Hall 1, CSL NE SW 7-29-7e, 2½ miles east of Snowden-McSweeney pool, Butler County, cored dry Arbuckle lime at 3238-3320 feet and was plugged.

Pryor & Lockhart et al's Davidson 1, CE½ NE NW 12-15-11w, 5 miles northeast of Davidson pool, Russell County, was without a show in Arbuckle lime, topped at 3309 feet and drilled to 3321 feet.

Imo Oil & Gas Company's Eveleigh 1-A, CEL SW NE 3-18-14w, east of Otis oil and gas field, Barton County, proved uncommercial after pumping 32 barrels of fluid, 85 percent water, in 4 hours. Bottom was at 3390 feet in Arbuckle, with plug set at 3135 feet. A small show of oil was logged in Lansing lime.

Steel- FIRST LINE OF NATIONAL DEFENSE

Republic Operates the World's Largest Blast Furnace

Every day more than one thousand tons of iron pours from this blast furnace—the largest in the world.

Add to this the output of sixteen other furnaces and you have a vivid picture of Republic's capacity to produce huge quantities of pig iron—the basic material from which all steels are made.

Compared with ten years ago, Republic's blast furnace capacity has increased 40 per cent. Ore reserves too, have been expanded, as well as open hearth, electric furnace, rolling mill and finishing capacities.

Republic offers its entire facilities—men, materials, machines and morale—to the support of those industries upon which now falls the burden of maintaining America's freedom. Republic is ready with ***steel—first line of national defense.***

The line of steels and steel products manufactured by Republic is so diversified that we have prepared a complete listing in Booklet No. 199. A copy will be sent you upon request.

REPUBLIC STEEL CORPORATION • CLEVELAND, OHIO

Berger Manufacturing Division • Niles Steel Products Division • Steel and Tubes Division • Union Drawn Steel Division • Truscon Steel Company

Oklahoma

Hunton Lime New Producing Horizon in Ramsey County

Mid-Continent Petroleum Corporation et al tested initial Hunton-lime production in Ramsey pool, Payne County, at Simpson 2, SWc 7-18n-2e, farthest north location in the pool. Drilled to 4882 feet in Wilcox sand, operators plugged back to 4774 feet and perforated casing in a new zone at 4677-84 feet with 48 shots, pay being topped at 4680 feet. On a 24-hour test, it pumped 94 barrels of 40.2-gravity oil and 283 barrels of water. Water decreased to 237 barrels, while oil was holding to approximately 80 to 90 barrels per day.

The Pure Oil Company's Park College 1 (200), SWc SE 27-5s-7e, a mile southeast of production on the Bryan County side of Cumberland pool, took drill-stem test at 5098 feet in lower Bromide sand with packer set at 5018 feet. Open one hour, the test showed 105 feet of oil-cut mud with no water or gas. Coring was resumed. Little 1 (101), NE SW SE 28-5s-7e, Marshall County, flowed 359 barrels of crude through 20/64-inch tubing choke in 24 hours. Pay is upper and lower Bromide sands at plug-back depth of 5087 feet. It is reported that Stanolind Oil & Gas Company may shortly start a test in the W½ 27-6s-8e, Bryan County, on a block assembled by George Deck. Acreage lies in Sections 21, 22, 27 and 28. Stewart 1 (103), CS½ SE NE 28-5s-7e, Bryan County, was officially completed for 597 barrels in 24 hours through a 15/64-inch tubing choke. Second Bromide, topped at 4891 feet, was penetrated to 5090 feet. Thomas 1 (102), SW NE NW 28-5s-7e, Marshall County, flowed 810 barrels in 24 hours on completion test through 9/64-inch tubing choke. Hole was drilled to 5162 feet and later plugged back to 5091 feet.

Prague pool, Lincoln and Pottawatomie counties, was extended with two new producers. Mid-States Oil Corporation's Provaznik 1, SWc 33-12n-6e, pumped 217 barrels of oil and 7 barrels of water in 24 hours after shooting Skinner sand at 3266-88 feet with 60 quarts. H. L. Berkey et al's Gregg 1, SEc 32-12n-6e, pumped 337 barrels of oil in 24 hours. Skinner sand, logged at 3259-83 feet, was squibbed with 40 quarts.

Gilcrease sand was proven commercially at the south end of the old Fish pool, Seminole and Hughes counties at Winona Oil & Gas Company's Meyers 1, SE SW NE 31-7n-8e, which, after perforating at 2892-2990 feet with 156 shots, tested 10 barrels hourly. Originally completed at 4247 feet in Wilcox sand, operators plugged back to 2990 feet. Cromwell production recently has been extended to the south, north and northwest.

Searight pool, Seminole County, was defined on the north at H. S. Moss et al's Gist 1, CS½ SE NE 27-10n-6e, abandoned in Hunton lime at 4286-4356 feet.

Burt Mullins extended McCracken pool, Wagoner County, ¾ mile southwest at Lyons 1, NW SE SE 20-18n-17e, completed for 25 barrels per day from shallow sand at 362-85 feet, shot with 40 quarts.

Vierson Oil & Gas Company's Bell 1, SWc NE 5-14n-5e, West Davenport discovery in Lincoln County, pumped 40 barrels of oil and 6 barrels of water from Prue sand, topped at 3400 feet. Plug was set at 3527 feet. Burke Greis Oil Corporation et al's Dew 1, NEc 9-12n-9e, Mason pool strike in Okfuskee County, perforated Hunton lime at 3895-3910 feet and acidized with 1500 gallons. While cleaning out, it flowed 20 barrels hourly with 10,000,000 cubic feet of gas.

Phillips Petroleum Company's Grape 1, CNW SE 30-18n-5w, Kingfisher County, topped second Wilcox at 7721 feet and made drill-stem test at 7831 feet with packer set at 7758 feet, recovered 35 stands of mud. At 7911 feet, operations stopped for an electric log and then shut down for orders. No shows were reported.

Benedum & Trees abandoned State 1, SW NW NW 13-21n-6e, northwest of Greenup pool, Pawnee County, at 3362 feet in Arbuckle lime. A small oil show was logged at 3060-71 feet in Wilcox.

Mohican Drilling Company's Boydstein 1, NWc NE 9-5s-9w, Cotton County, topped Arbuckle lime at 2363 feet and drilled to 2466 feet. Electric log revealed no shows, and hole was plugged.

Zephyr Drilling Company et al's Morrell 1, SWc SE 8-28n-4e, northeast of Mervine pool, Kay County, was abandoned in Mississippi at 3245 feet.

Two Hughes County wildcats were plugged. Kennith Ellison, Phillips Petroleum Company et al's Bird "A" 1, SE NE SE 4-9n-11e, a twin offset to a wildcat to the Wilcox sand in the old shallow Alabama pool, was dry in Wilcox at 3786-3826 feet. Scruggs Drilling Company et al's Hamilton 1, C SW SW 7-8n-11e, between Alabama and West Wetumka pools, logged dry Booch sand at 2255-85 feet and was abandoned at 2315 feet.

Kansas

New Oil Areas Indicated for Phillips and Stafford Counties

Cities Service Oil Company opened the second producing area for Phillips County, Northern Kansas, at Ray 1, NE NW SE 32-5-20w, 9 miles southeast of Van Patton pool, Norton County, and 15 miles west of Bow Creek pool, Phillips County. Reagan sand was perforated at 3540-53 feet, and hole immediately filled 2900 feet with 32-gravity oil. Total depth is 3603 feet in Arbuckle lime. Tubing and rods were run for a pumping potential. Consumers Cooperative Refining Company, Phillipsburg, is taking 3000 barrels daily from scattered pools in Rooks and Phillips counties, and is expected to connect with this new producing area.

Shell Oil Company opened a Stafford County area at Bean 1, SEc SW 21-23-12w, which filled 3600 feet with high-gravity crude when Arbuckle lime, topped at 3839 feet, was penetrated to 3852 feet. Hole was being deepened after cementing 4½-inch casing at 3840 feet. This strike is on a northeast-southwest structural trend between St. John and Richardson pools, 6 miles from each area.

Shell Oil Company and Atlantic Refining Company's Riley 1, SWc 28-23-11w, on a northwest-southeast structural trend between Zenith and Richardson pools, topped Arbuckle lime at 3772 feet and drilled in 10 feet without encountering a show.

Seaney, Clampitt & Carnihan may open a producing area in Stafford County at Boyd 1, CW½ SW SW 4-21-14w, 4 miles west and a mile south of Hiss pool, Southern Barton County. Arbuckle lime, drilled to 3645 feet, showed good saturation.

Three miles west of Brown pool, Cowley County, Ralph Wixon et al's Clover Ranch 1, CE½ 17-31-7e, averaged 15 barrels daily without acid from 2810 feet. W. M. McKnab et al's McKown 1, NEc SW 31-33-5e, northwest of Rahn pool, was abandoned at 3245 feet in Mississippi lime, topped at 3122 feet. A show of oil was logged, but a fishing job failed to come through.

A new gas area was opened in Douglas County at Buckley et al's Hubbard 1, SEc SW 11-12-21e, testing 1,500,000 cubic feet of gas per day before being shut in. Pay was drilled to 1327 feet. S. W. Forrester et al's Alternernd 1, CSL NW 35-12-20e, topped Mississippi lime at 1104 feet, filled with water at 1605 feet, and was shut down for orders.

Stanolind Oil & Gas Company will test Pennsylvanian shows at Judd 1, C SE SE 15-21-38w, deep wildcat in Kearney County, Western Kansas. Mississippi lime was topped at 4811 feet, Viola lime at 5425 feet, Arbuckle lime at 5555 feet, and Granite at 6065 feet. Hole was carried to 6071 feet, and plugged back to 5384 feet.

H. H. Royer, Duwe & Farris et al's Hutchins 1, CWL SW SE 29-21-8w, a mile southwest of Sterling and southwest of Wherry pool, Rice County, was abandoned at 3700 feet in Arbuckle lime. Hole was plugged back to 3319 feet, but shows in Sooy at 3285-92 feet and 3317-19 feet failed to produce.

Jocelyn, Murfin et al's Hall 1, CSL NE SW 7-29-7e, 2½ miles east of Snowden-McSweeney pool, Butler County, cored dry Arbuckle lime at 3238-3320 feet and was plugged.

Pryor & Lockhart et al's Davidson 1, CE½ NE NW 12-15-11w, 5 miles northeast of Davidson pool, Russell County, was without a show in Arbuckle lime, topped at 3309 feet and drilled to 3321 feet.

Imo Oil & Gas Company's Eveleigh 1-A, CEL SW NE 3-18-14w, east of Otis oil and gas field, Barton County, proved uncommercial after pumping 32 barrels of fluid, 85 percent water, in 4 hours. Bottom was at 3390 feet in Arbuckle, with plug set at 3135 feet. A small show of oil was logged in Lansing lime.

Steel—FIRST LINE OF NATIONAL DEFENSE

Republic Operates the World's Largest Blast Furnace

Every day more than one thousand tons of iron pours from this blast furnace—the largest in the world.

Add to this the output of sixteen other furnaces and you have a vivid picture of Republic's capacity to produce huge quantities of pig iron—the basic material from which all steels are made.

Compared with ten years ago, Republic's blast furnace capacity has increased 40 per cent. Ore reserves too, have been expanded, as well as open hearth, electric furnace, rolling mill and finishing capacities.

Republic offers its entire facilities—men, materials, machines and morale—to the support of those industries upon which now falls the burden of maintaining America's freedom. Republic is ready with ***steel—first line of national defense.***

The line of steels and steel products manufactured by Republic is so diversified that we have prepared a complete listing in Booklet No. 199. A copy will be sent you upon request.

REPUBLIC STEEL CORPORATION • CLEVELAND, OHIO

Berger Manufacturing Division • Niles Steel Products Division • Steel and Tubes Division • Union Drawn Steel Division • Truscon Steel Company

North Texas

Ellenburger May Be Added To Ringgold Producing Zones

Ellenburger dolomite became a prospective producing horizon for the Ringgold pool, Western Montague County, when British-American Oil Producing Company's J. A. Martin 2, northwest outpost, showed light green oil in saturated zone at 5864-75 feet. Additional cores will be pulled before attempting production test. This well is the first in the pool to drill through the Bend, which produces at the 5700- and 5800-foot levels, and was carried deeper because the regular horizons offered little encouragement for commercial production. Top of Bend was called at 5645 feet, Ellenburger at 5860 feet, making a 215-foot section of the former. The absence of the Mississippian and Simpson beds is not unusual for this general area.

Short section of Bend was expected in the Ringgold pool, as Sinclair Prairie Oil Company's Milam 1, 3¼ miles northeast of the new Ellenburger prospect, logged 205 feet of Bend, which carried small amount of free oil at 3 levels, before quitting in Ellenburger at 5795-6000 feet. The latters' separate pay levels resulted in Fain-McGaha Oil Corporation's Spring 1, northwest offset to the Ringgold discovery, being carried deeper after showing for a small flowing well at 5668-5702 feet, and second oil zone was found at 5789-94 feet. Spring 1 blew out with a rated flow of 100 barrels hourly when deepened, and last week gauged 431 barrels of 47-gravity oil in 3¾ hours through ½-inch casing choke. Gulf Oil Corporation's Worsham-Spring 2 and W. B. Omohundro et al's Seay 3 were drilling at 3370 feet and 2120 feet, respectively. Tom Owens and Larry Hults' Tucker 1, western Montague County wildcat, was repairing rig at 5575 feet in shale, with trace of oil stain in Strawn at 5210-26 feet.

Britt Cranfill-C. E. Rodgers et al's McKay 1, Northwestern Wise County wildcat, reflected its high structural position in logging show of oil at 4173-75 feet in sand member of Strawn, topped at 1785 feet. It is on the west flank of the Fort Worth syncline, and is checking about 180 feet higher than Walter Gant et al's Will Laird 1, southwestern Montague County wildcat 2¾ miles north. Laird 1 was drilling shale at 6600 feet, having logged mostly shale since leaving the conglomerate section of the Bend, topped at 5690 feet, near the 6000-foot level. It is due to encounter Mississippian and Simpson beds, although neither formation has been identified from drillers' log. Free oil passed up in Strawn and Bend zones by Laird 1 warrant the running of casing for a production test.

Benton-Holmes Extended East

Mudge Oil Company's Custer 1, east outpost for the Benton-Holmes pool, Eastern Montague County, flowed 89 barrels oil on 3-hour potential test through chokes from intermediate Strawn pay at 3423-70 feet to become the second completion for this level. Interest in the Bonita pool, where 5 tests are underway, centers upon A. R. Dillard and E. C. Norwood's Holland 1, mile northeast of the town. It was drilling shale at 4010 feet, and represents the first try for a major extension.

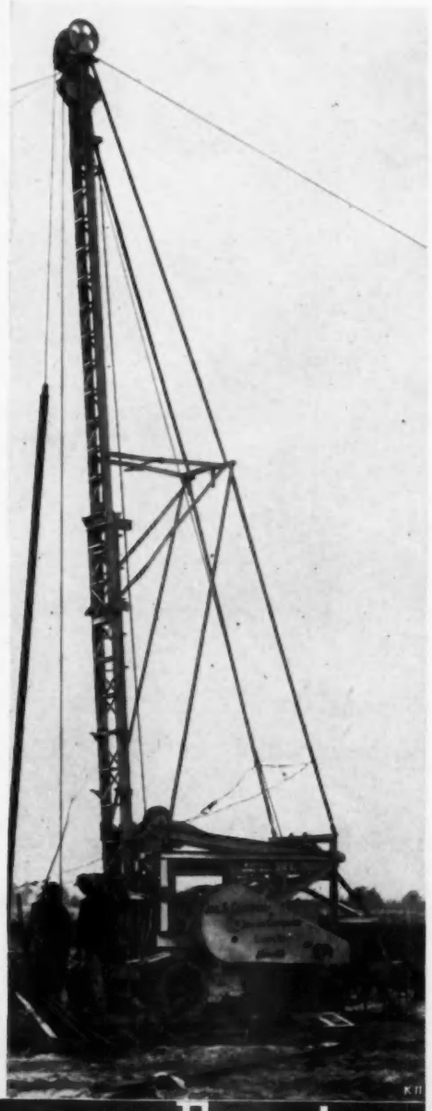
The Bend lime prospect of H. M. Horton and Pete Wiggins on the W. I. Howard 1000-acre lease, western Clay County, has cemented 5½-inch pipe on top of Bend at 5458 feet to test saturation in lime at 5460-84 feet. The test was carried to 5604 feet, then plugged back to base of lime section at 5500 feet before running pipe. It is expected to make a small producer. Phillips Petroleum Company paid $25,000 for half-interest in the test and 1322-acre drilling block. Shell Oil Company's Coburn 1, east edge of the Shell-Henderson pool, southwestern Clay County, cemented 4½-inch pipe at 3622 feet, 5 feet off bottom, and will perforate opposite nominal saturation logged at 3240-42 feet and near the 3500-foot level. The company's Henderson 4 is making very little oil with water after perforating casing near the 3500-foot level, with 4½-inch pipe cemented at 3562 feet, or 13 feet off bottom.

K-M-A and Hull-Silk Slow to Respond

Property owners in the K-M-A and Hull-Silk fields, which afford the greatest number of proved undrilled locations in North Texas, have not stepped up their volume of drilling as anticipated when the local crude market regained a sound footing early in August. Independents predominate in the two areas. Threat of a general price cut prevailed immediately prior to the restoration of a firm market demand, and operators had prepared to curtail development during the balance of

Strokes that pound out

PROFITS



The exclusive Bucyrus-Erie automatic feed on the 24-L Spudder insures you maximum penetration with each blow, the tension of the cable at each impact of the tools determining the amount of line paid out. In soft material, where you get rapid penetration, the line is paid out rapidly. With slower penetration, there is correspondingly slower feed.

This control, obtained by means of vernier adjustment on the oversize bull-reel brake-housing and band brake, provides automatically the exactly right setting for each stroke to hit with a smashing shattering blow that pays dividends in increased footage. When driving pipe, the automatic feed is of special value. A uniform blow with continuous feed drives pipe faster and with less danger of damaging threads or couplings.

Investigate what the 24-L can do for you . . . write for bulletin. For deeper wells, look over the new, big-capacity 36-L Spudder.

BUCYRUS ERIE

Bucyrus-Erie

SOUTH MILWAUKEE, WISCONSIN

NAPHTHAS · FUEL OILS · DIESEL FUELS
GASOLINE · KEROSENE · NEUTRALS
BRIGHT STOCKS · AUTOMOBILE
AND INDUSTRIAL LUBRICANTS

•

Modern refining methods, technical and scientific research, complete laboratory control of quality

the year. The majority rely upon long-term loans to finance drilling. Some weeks are required to arrange for the financing of new wells, and the upturn in drilling may not materialize until September. Elimination of production holidays and larger allowables will facilitate loans.

Another Ellenburger failure was recorded in north central portion of the K-M-A field when W. H. Hammon et al's Womack 1, SEc 58½-acre lease, GC&SF Section 2, A-796, proved dry in dolomite at 4244-4410 feet. However, the hole was plugged back to 4000 feet to complete in the regular Strawn saturation. Ellenburger production is restricted to two wells in the southwest portion of the field, while 17 tests within and adjacent to the field found this formation barren of production.

Continental Oil Company's Wilson-McCrory 18, an inside well for the Hull-Silk field, increased its natural flow to 305 barrels of 41-gravity oil initial after reaming pay section from 6- to 11-inch diameter hole. Broken oil sand logged at 4316-85 feet lacked normal porosity. Magnolia Petroleum Company's May Rutty 12, near west edge of the field, apparently has a similar condition in sand pay at 3744-68 feet, having quit flowing after yielding 19 barrels oil in 3 hours. The Texas Company's Wilson 42-A, twin location to a 4400-foot pumper near southeast edge of the field, is installing pumping unit after swabbing 35 barrels fluid, 50 percent oil, in 15 hours at 3938 feet. Bert Ligon et al's White 4-E, NWc S½ Lot 9, Section 40, east extension sector, swabbed 68 barrels oil in 3½ hours from Strawn sand at 3856-3912 feet. Gulf Oil Corporation's Siegel 21 flowed 95 barrels oil through casing in 7 hours from broken sand at 3730-88 feet. Humble Oil & Refining Company's Wilson 9, SEc ATNCL Section 125, is a Strawn project for the west edge of the field, and represents the company's first deep test on its shallow properties in the area.

Expansion of the Walnut Bend field, Cooke County, to the east is assured by two outposts being drilled by Sinclair Prairie Oil Company. Its G. L. Ramsey 1 is testing sand at 4709-18 feet, while R. J. Timmis 1 tested 1515 feet of oil and 120 feet of drilling fluid from sand at 4819-28 feet, and picked up another oil zone in broken sand at 4892-4914 feet.

West Texas

Test Promises Ellenburger Pool and Depth Record

Producing depth record and a new Ellenburger-lime strike for West Texas looms for Gulf Oil Corporation's Wristen 5, east corner of W¼ H&TC Section 18, Block 5, Shipley pool, Ward County. Oil saturation was encountered at 9002 feet in the upper section of the dolomite, and drill-stem test at 8967-9049 feet yielded 350 feet of drilling fluid, averaging 2 percent high-gravity crude. No free gas was present on this test, while an analysis of the fluid showed no formation water. Coring was underway late last week at 9140 feet, with the last 75 feet identified as dense lime and apparently void of saturation. The test will be carried deeper before running casing for a production test.

Gulf Oil Corporation holds lease on a large block of acreage around Wristen 5, which was drilled with tools to 2885 feet, then changed to rotary after cementing 9⅝-inch pipe at 2518 feet. Top of Simpson has been tentatively called at 7400 feet, with an elevation of 2501 feet. This Upper Ordovician member did not indicate production possibilities. Wristen 5 is 10 miles southwest of Ellenburger production in the Sand Hills field, Crane County, which produces near the 6000-foot level, and all completions to date have been recorded by Gulf Oil Corporation.

Sinclair Prairie Oil Company's Wirt Davis 1, Southeastern Ward County wildcat which showed for a commercial pumper from sandy-lime at 2355-75 feet, was drilling at 2630 feet, carrying salt water from sand at 2451 feet and sulphur water from lime at 2495-2500 feet. It will continue to the 2900-foot level, which produces in the Shipley pool. Top of Yates sand was logged at 1725 feet, or 732 feet above sea level.

Plymouth Oil Company's Richard Levy 1, northwestern Pecos County Ordovician project, was drilling lime and chert at 6470 feet. Humble Oil & Refining Company is to seek Ellenburger production in the Apco pool, Pecos County, in starting Shearer 1, CE¼ S¼ H&GN Section 99, Block 10, offsetting at 4724-foot flowing well. Magnolia Petroleum Company's J. S. Masterson 1, originally completed last November at 4536 feet, deepened to 4661 feet and flowed 183 barrels of 42½-gravity oil in 4 hours after retreating with 6000 gallons of acid. More development is in store for the area as soon as a greater market is available for the oil.

Stanolind Oil & Gas Company's Midland 1-C, CNW SW Section 35, Block 42-T-

The House that JACKS Built. Modern main office of the oldest and largest exclusive manufacturer of pumping equipment in the world. Jensen Brothers Manufacturing Co., Coffeyville, Kansas.

Vacation Free With a JENSEN!

With a JENSEN Jack you get more than 20 years of experience in lifting oil from wells around the world.

You get a unit equipped to balance your well so accurately that relatively little power is required.

You get a unit with a stroke so smooth and dependable that other well equipment lasts longer and gives you less trouble.

You get a unit with a gear reduction that two experienced men can dismantle and reassemble in less than fifteen minutes—a simple, **dependable** gear reduction.

You get a permanent vacation from avoidable delays and shutdowns.

JENSEN BROTHERS MANUFACTURING CO.

"The House that JACKS Built"

. . . . . **Coffeyville, Kansas, U. S. A.**

For detailed JENSEN JACK description and specifications, see: . . . PRODUCING EQUIPMENT DIRECTORY or COMPOSITE CATALOG.

1-N, 1¼ miles east of production in the North Cowden field, Ector County, has cemented 5½-inch pipe at 4726 feet to test oil saturation at 4773-4827 feet, with the hole bottomed at 4845 feet. It is about 200 feet below the depth of nearest producers, and is below the water level for the east side of the field. Top of brown lime was called at 4245 feet and solid lime at 4540 feet with an elevation of 3034 feet.

Texas Pacific Coal & Oil Company and Seaboard Oil Company's Midland 1-A, Southeastern Andrews County wildcat, failed to attain water shutoff in plugging back to 4864 feet from 4888 feet, and has recemented hole. Permian saturation at 4850-73 feet previously showed small volume of free oil with water.

F. J. Downey et al have contracted to start a 5500-foot wildcat test in Western Gaines County, 8 miles west of the south end of the Seminole field. Location has been tentatively authorized for F. & M. Bank Fee, C NW SE CCSD&RG Section 368, Block G, with Shell Oil Company and Skelly Oil Company contributing acreage. Five owners of nearby acreage have pledged dry-hole money.

Phillips Petroleum Company's Frank Cowden-Embar 1, Andrews County wildcat and 4 miles west of the Emma pool, tested small volume of gas when formation tester was used at 2570-2838 feet in Yates, topped at 2610 feet. It was drilling at 3630 feet.

East Texas

Freestone County Test Quits After Small Show

Arkansas Fuel Oil Company's Utley 1, Freestone County wildcat 4 miles north of Fairfield, has been ordered plugged after testing a small volume of oil and gas with water through perforations at 3997-4000 feet. It was carried to Georgetown lime at 4480-4507 feet, and pipe was set at 4077 feet after electric log indicated porosity in upper Woodbine, topped at 3995 feet.

C. B. Zuber et al's Conner 1, Morris County wildcat 5½ miles southwest of Daingerfield, was abandoned at 4562 feet in Woodbine, topped at 4153 feet.

Drilling in the East Texas field has leveled off to an average of 8 active tests, with a total of 21 operations. Abandoned producers have exceeded new completions for 8 consecutive weeks. First substantial property sale in some months involves the purchase by George T. Kimball and C. J. Bohner of Thos. D. Humphrey's Baker, Branson, Dunbar, Johnson and Thomas leases, aggregating 294 acres with 22 flowing and 9 pumping wells in the north portion of the field, for $300,000 cash, and $18,750 payable from production. Humphrey retains 34 wells in the field.

Texas May Offer 100,000 Acres of Submerged Land

The Texas State Land Board has under consideration a plan to offer 100,000 acres of submerged land for mineral lease during the fall, Land Commissioner Bascom Giles said last week. The board has been requested to offer the land.

The reductions apply BETWEEN ALL POINTS IN TEXAS-LOUISIANA. TICKETS ARE ON SALE for trains arriving destination AUG. 31, SEPT. 1 and prior to noon SEPT. 2.

EXAMPLE ROUND-TRIPS

BETWEEN—

Austin and Houston	**$3.55**
Beaumont and New Orleans	**6.20**
Brownsville and San Antonio	**5.95**
Corpus Christi and Houston	**4.95**
Dallas and Galveston	**6.00**
El Paso and San Antonio	**12.60**
Ft. Worth and Galveston	**6.00**
Houston and Dallas-Ft. Worth	**6.00**
Lake Charles and Beaumont	**1.45**
New Orleans and Houston	**7.90**
San Antonio and Houston	**5.00**
Shreveport and Galveston	**5.90**

RETURN LIMIT: BE BACK SEPT. 4

Fares between San Antonio-Houston and Houston-Dallas-Ft. Worth are on sale daily—return limit 15 days.

OUTSTANDING SERVICE

SP unites the principal cities of Texas and Louisiana with fine, air-conditioned trains — offering you safe, *comfortable, economical* travel!

Southern Pacific

J. T. MONROE, Passenger Traffic Manager
Southern Pacific Bldg., Houston, Texas

SHIP VIA SP — FREE PICK-UP AND DELIVERY SERVICE

Southwest Texas

Victoria County Wildcat Has Promising Indications

Humble Oil & Refining Company was attempting to open a new oil pool several miles east of the McFaddin pool and south of the Bloomington area in Victoria County. Nave 1, Traviesa Grant, was waiting on cement after being drilled to 6081 feet. A string of 5½-inch casing was run to 6067 feet and perforations first will be made in a zone at 5932-59 feet. Sand at 5615-21 will be tested should the first prove ineffective. Other tests in the region have had sufficient showings to make this appear promising.

Jackson County's work was largely involved in field wells, an even dozen completions being recorded. The wildcat interest, however, was centered around Barnsdall Oil Company's Pritchett 1, on the Clare prospect. The well was going ahead below 6000 feet.

Stanolind Oil & Gas Company's Ivey 1, one mile north of the Midway field, San Patricio County, was reworking after first test in the 5300-foot sand went to salt water. It first flowed 126 barrels of oil per day through ⅛-inch choke and showed a small amount of water. The cut increased to about 50 percent and a squeeze job followed. Pipe was reperforated at 5326-29 feet and another test was underway.

T. H. Davey's Hutto 1, west of the above field, was bleeding off gas coming from a shallow sand impregnated from nearby craters. Hole had been drilled to 6047 feet, then attempted to blow out. The flow is coming from between the drill stem and the surface casing.

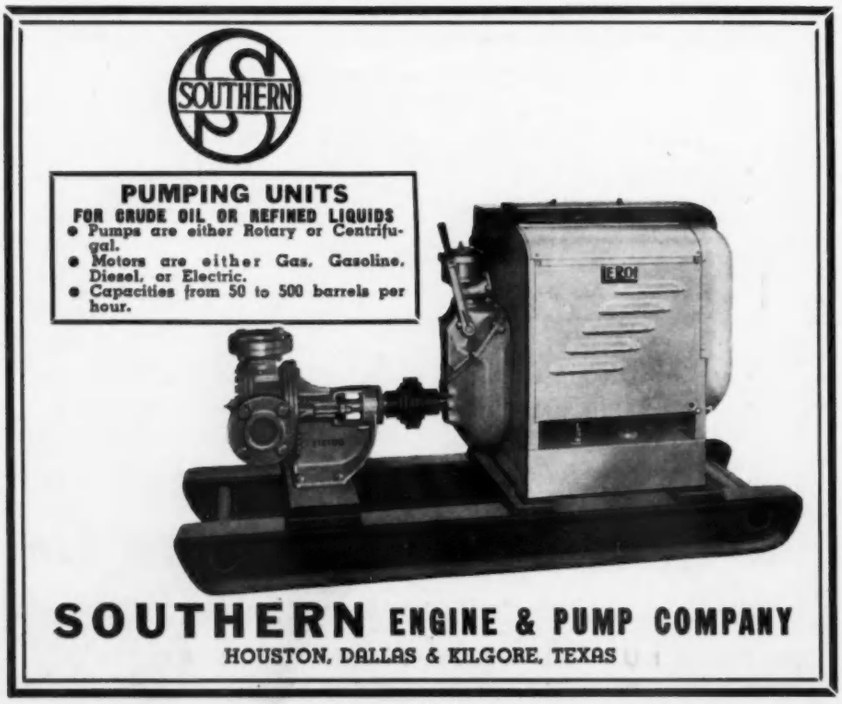
W. R. Duncan 1, wildcat 7800 feet southwest of the East Flour Bluff field of Nueces County and drilled by Humble Oil & Refining Company, was testing through perforations just below 6790 feet. First tested at 6794-6802 feet, it flowed 58 barrels of fluid per day, 60 percent salt water. These perforations were squeezed for the new test. The company during the week completed State 1-E as the second oil well in the same pool.

Another test will be drilled on the prospect west of Orange Grove in Jim Wells County. H. R. Smith's Thiel 1, Block 25 of the Gulf Coast Farming & Trucking Subdivision, and discovery of of the pool, flowed 20 barrels of fluid per day, 90 percent salt water and the rest 31.5-gravity oil through ⅛-inch choke under 100 pounds working pressure. It was shut in while a second well was being drilled. The first well was finished through perforations at 4920-26 feet and at 4930-37 feet. McNeill sand was cored at 4920-37 feet, but the hole was carried to 5323 feet before being plugged back for completion.

Second Oil Sand Found In LaSalle County Well

A second oil sand in the Washburn Ranch area of LaSalle County was indicated when H. R. Cullen's J. L. Washburn 1 produced 130 barrels of fluid per day via air lift after perforations at 5060-67 feet. The fluid included 20 percent brackish water and the remainder 43-gravity oil. Previously the well had flowed 2 barrels of fluid per hour, 1/3 brackish water the remainder 44-gravity oil. The flow had been through 1/16-inch choke under 200 pounds tubing and 600 pounds casing pressures. This test had been through perforations at 5418-26 feet. New perforations will be made higher.

The wildcat is located in the southwest corner of Section 67 and is 8 miles southwest of Fowlerton.


SOUTHERN
PUMPING UNITS
FOR CRUDE OIL OR REFINED LIQUIDS
• Pumps are either Rotary or Centrifugal.
• Motors are either Gas, Gasoline, Diesel, or Electric.
• Capacities from 50 to 500 barrels per hour.
SOUTHERN ENGINE & PUMP COMPANY
HOUSTON, DALLAS & KILGORE, TEXAS

Two wildcats on the Wilcox trend are at critical depths. Atlantic Refining Company's Conwell 1, is near 8000 feet and coring in the Wilcox zone. It is one mile northeast of the discovery of the Thomaston field in DeWitt County.

Boyle Field Gets New Sand And Extension Mile South

Extension of the Boyle field more than one mile southward and opening of a second producing sand was apparent late this week as Borsodi Petroleum Company perforated casing in a zone at 3159-79 feet in de Vela 1. Regular sand in the Starr County field is at 3500 feet.

The wildcat, drilled in Share 2-A, Porcion 92, and on a Sun Oil Company farmout, had been carried to 4202 feet. It found the regular pay at 3526-38 feet and on a drill-stem test showed a slight amount of oil and mud. Pipe then was set at 3239 feet for completion.

Rutherford & Owen's Standard Trust Company 2, 1570 feet west of field production, found the regular sand at 3480-3507 feet and was completed through perforations at 3503-6 feet. It flowed 49.67 barrels of 47.2-gravity oil per day through 3/32-inch choke, showing 800 pounds casing and 450 pounds tubing pressures.

Sun Oil Company apparently had widened the North Rincon field of Starr County two miles northeast with Saenz 1. On a drill-stem test in the well, Section 80, it recovered 75 feet of oil- and gas-cut mud under 500 pounds pressure in 7 minutes.

Atascosa County Has Show For Second Field Opener

Atascosa County's second oil field apparently was being opened Saturday with W. J. Walton Drilling Company testing Tuerpe 1. The well had topped the Austin chalk between 2399-2403 feet and drilled to 2830 feet. It showed oil in the chalk, Buda and again in the Edwards lime. All of the formations where tight and hard, but it is expected that production will be obtained when the well is acidized.

The operation, drilled with Walton's rig, is located 3625 feet from the north line and 1780 feet from the east line of the Robert C. Rogers Survey.

Duval County

Cole field of Duval County was extended 2½ miles north or a new producing area was established as Magnolia Petroleum Company's J. Lopez 2 cored a sand in the Cole zone at 1688-99 feet. A drill-tem test recovered 100 pounds gas pressure in 30 minutes. The hole was being cored for the Lopez (Mirando) sand below 2500 feet. Location is in Survey No. 6 and is 2332 feet northwest of No. 1, a failure.

Live Oak County

Production in the Chernoskey sand at 1017-21 feet was being attempted by Humphries & Hotchkins in C. L. Holmes 1. The well is located in the southeast corner of the 328-acre tract, Bridga Haughy Survey, four miles north of Three Rivers in Live Oak County. It was drilled to 1847 feet in the Pettus zone, topped at 1789 feet, then plugged back. Pipe was landed at 1049 feet.

Texas Gulf Coast

Galveston Bay Test Provides New Distillate Field

Humble Oil & Refining Company gave the Upper Texas Coast its second marine field, completing State 1-A-247 for 24 barrels of 43-gravity distillate and 1,350,000 cubic feet of gas daily through ⅛-inch choke from perforations at the original test point, 8814-16 feet. Tubing pressure was 2900 pounds. The field, which will probably be called Red Fish Reef, is in Galveston Bay 10 miles southeast of the Cedar Point field, Chambers County, on a structure found by recent seismograph work. Six sands between 8814 and 9125 feet were tested, with the discovery sand first testing one barrel of distillate daily and proving the only prospect for completion. The company has exhibited marked confidence in this area, making application to the United States War Department for permit for a pipe line crossing the ship channel to the Cedar Point field, and filing applications for 10 drilling permits in the vicinity.

Company's State 2-A-246, confirmation test 1140 feet southeast of the discovery, set protection string at 3000 feet, while State 1-C-54, Trinity Bay wildcat 4 miles west of the discovery, on the Fisher's Reef prospect, was drilled past 2050 feet. The latter test is an investigation of the saturated Hackberry zone of the lower Frio found by Standard Oil Company of Texas and Salt Dome Oil Corporation in State 1-54, May abandonment, at 9508-38 feet. Side-wall samples and electric log gave favorable indications in a number of zones above the Hackberry, revealing from 2 to 8 percent gas and oil in sands at 8992-9028 feet. In this test, Heterostegina was found at 6940 feet and Frio at 7590 feet. If a well is made here it will mark the fourth strike among a selected group of five gravity-anomaly prospects found by torsion-balance surveys made by Salt Dome Oil Corporation several years ago. Of the other four, Caplen, Cedar Point and Cotton Lake have been converted, while Angleton Grove is partially condemned by a dry hole. Besides operators of the two tests, acreage in the general area is all held by Gulf Oil Corporation and Tide Water Associated Oil Company. Standard Oil Company of Texas and Salt Dome Oil Corporation were waiting on cement at 1960 feet in State 1-66, third test for the prospect.

Other off-shore wells made up the most intense marine exploration in several years. On the Elm Grove prospect in East Bay, 3 miles north of the Caplen field on Bolivar Peninsula, The Texas Company drilled State 1-237 past 2050 feet. Hall-Jordan Oil Company and British American Oil Company set surface pipe at 2000 feet in State 1-72, Gulf of Mexico prospect wildcat 2 miles off the Jefferson County shore near Sabine Pass. This test is an east offset to Hargrove's State 1, abandoned with drill pipe stuck at 5821 feet after gas sand was found at 2640-70 feet and oil sand at 2796-2812 feet. Operator's testimony at a legislative investigation was that either sand was good enough to make a well.

Mt. Houston prospect, Harris County, became a dry gas field as Jack Frazier's Griffith 4, fifth test on the structure, flowed an undisclosed quantity through ¼-inch choke from Miocene sands at 3482-85 feet, under 600 pounds pressure. This test was drilled to 4200 feet with objective the 4073-78-foot sand which flowed oil and salt water in December, 1938, from Griffith 1, 1200 feet east of Griffith 4. Three other tests have found salt water in the 4200-foot zone, while the most recent, Frazier's Johnson 1, drill-stem tested salt water and a little oil from 3502-10 feet, evidently the gas discovery sand. The structure was found in 1935 with torsion balance and reflection seismograph, and apparently centers in the Whitney Britton subdivision, site of Frazier's last two tests. Gas will be used for further drilling.

Sweeney 1, Richardson and Christian-Carpenter Drilling Company's second well in the Ogburn field, Harris County, failed to verify the 6918-foot distillate sand found in Marks 1, discovery, 5000 feet west, and was abandoned at 7012 feet after running electric log. The test, 100 feet lower than the discovery, found an oil and salt water sand in the Cockfield at 6461 feet, and cored sand with an oil odor at 6600 feet. Operators will move rig from this Continental Oil Company farmout 3200 feet southwest of the discovery to drill Rorick 1. Current hopes of confirmation now rest in W. L. Goldston's Josey 1, 2000 feet north of the discovery, which cored

Is it true

what they say about B. H. Pressure?

It is a recognized fact that accurate Bottom Hole Pressure records are the most practical method of determining the *productivity index* of a single flowing well or of an oil field. *(Some states require this method of potential determination.)* Through the use of Subsurface Recording Instruments tests can be exactly duplicated a month or a year later. Basic information obtained by the use of HUMBLE TYPE subsurface Recording and Sampling instruments will assist in determining:

Estimate of oil reserves. Presence and movement of gas cap. Amount of fluid to be lifted. Minimum flowing pressures. Specific productivity factor. Density of fluid column. Static fluid and oil levels. Gas-oil ratios, etc.

1¼" O.D. SUBSURFACE PRESSURE GAUGES—maximum recorder and clock recorder types. HIGH PRESSURE SUBSURFACE SAMPLER and the SUBSURFACE RECORDING THERMOMETER—all Humble Types, are manufactured, sold, and serviced exclusively by E. L. I.

All three instruments are sufficiently rugged to withstand the abuse of oil field use, and are not effected by the action of corrosive acids. Trained personnel is not necessary to operate these instruments.

The gauges measure pressures to an accuracy of 0.5% and with special precautions to an accuracy of 0.25%. Will measure pressures to 8,000 lbs., per sq. inch or higher.

WRITE FOR DESCRIPTIVE LITERATURE

World Wide Service

Engineering Laboratories, Inc.

CONSULTING ENGINEERS AND MANUFACTURERS

TULSA, OKLAHOMA, U. S. A.

41-gravity distillate saturation in the discovery pay at 6937-41 feet, and 9 feet of oil sand in a new strata at 6600 feet, before stuck drill pipe forced a sidetrack from whipstock set at 5200 feet. Richardson and Christian-Carpenter Drilling Company have an inactive location in Backen 1, 5000 feet southwest of the discovery. The discovery, fourteenth well on a 10-year-old torsion balance prospect, gauged 108 barrels of 58-gravity distillate daily, with 2,000,000 feet of gas through 11/64-inch bottom-hole and ¼-inch surface choke. Continental Oil Company, Pan-American Production Company and Cities Service Oil Company hold nearby acreage which probably will not be drilled until current tests have provided more information.

On Southwest Algoa prospect, 3½ miles southwest of Algoa and 3½ miles northwest of the Alta Loma field, John Brown Survey, The Texas Company was coring for Frio past 9000 feet in Kaimer 1. Objective is the prolific 9166-foot sand which produced over 300,000 barrels in three months, out of control, at the Alta Loma discovery. Kaimer 1 is the fifth test on this 6-year-old torsion balance prospect. Wynn Crosby's Wilson 1, Reynolds Survey, found salt water in the sand in May, 1939. Beatty, Bowles & Borsodie's Truska 1 went to 10,083 feet without success.

Colmesneil to Have 4800-Foot Test

The Colmesneil prospect of Tyler County, discovered by surface geology by The Pure Oil Company in 1933, will be tested to 4800 feet by Franklin, Tidemann & Werby's Thomas & Schlicher Company 1, J. C. Boyatt Survey, 5½ miles northwest of Colmesneil. Boone Bros.' Crews 1, first test, showed oil and gas at 1961-65 feet and was abandoned at 3026 feet. Werby's Hayes 1, 2½ miles south of current location, was abandoned at 4530 feet. Paleo on this well placed Jackson at 1215 feet. Hockleyensis at 1379 feet, Operculina at 1984 feet, Cockfield at 2090 feet, Cook Mountain at 3210 feet, Sparta at 3690 feet, Weches at 3990 feet and Wilcox at 4270 feet. Franklin's 5000-acre block on which the test is to be drilled was taken by Atlantic Refining Company on shooting option, shot, and released. Other leaseholders in this area are The Pure Oil Company and Stanolind Oil & Gas Company. Test will be drilled with portable rig.

At Rowan, new Brazoria County field, Rowan & Nichols were drilling past 8700 feet in Hubbard 2, 933 feet east of the 8538-54-foot discovery, which is now making an allowable of 95 barrels of 40-gravity distillate daily. Stanolind Oil & Gas Company staked Hodnett 1, direct northeast offset to the discovery. Amerada Petroleum Company was reportedly ready to make location on the Parsons tract.

At Alta Loma, Galveston County, Stanolind Oil & Gas Company drilled past 10,424 feet in Hulen 2, 1350 feet southwest of the discovery, with intention of exploring another 100 feet before perforating in the discovery pay at 9166 feet. This sand, topped six feet higher than in the discovery, provided the first information on the sand section, which is 35 feet thick and overlies 22 feet of salt water sand. Hulen 3, relief well, and Hulen 1, wild discovery, were shut in while drill stem was pulled from the latter.

Humble Oil & Refining Company abandoned Furr 1, wildcat on Green's Bayou prospect, Harris County, at 9510 feet after running electric log to 9505 feet. The test, which was supported by several operators, was projected to 9000 feet to test Yegua, but was carried deeper as the formations thickened. All markers were in a regionally normal position. The company's Woodley 17-Y, deep Wilcox test in the Racoon bend field, Austin County, set 7-inch protection string at 7225 feet, poured 4800-foot plug, and stuck drill stem while drilling the plug. Hardy 7-Y, the company's deep test projected to 7500 feet in Racoon Bend, was an inactive location.

At South China, Jefferson County, Titantic Oil Company spudded Fontenot 1-B, northeast of Fontenot 1, recent east extension for the south end of the field. Southwest of Big Hill field, Gulf Oil Corporation took 21,000 acres in the W. S. Benson Survey on shooting option. Pacific-Irwin Oil Company and Standard Oil Company of Texas were working on a farmout of the latter's Schoenfeld tract, Lusk Survey, in southeastern Grimes County. This Magnolia prospect was found in 1936 by Humble Oil & Refining Company, using seismograph, torsion balance and core drill, and has been tested only by that operator's South Texas Development Company 1, 6500-foot core hole in the Hillhouse Survey, Waller County. The company and Sun Oil Company are the only leaseholders after Magnolia Petroleum Company's recent relinquishment.

J. Newton Rayzor failed to obtain support to deepen Robertson 1, wildcat on the Red Bluff prospect, 3 miles north of Seabrook, Harris County, and abandoned at 8012 feet. Stanolind Oil & Gas Company and others made dry-hole contribution for this second test on a 9-year-old torsion balance prospect. Loffland Brothers drilled the well.

In Montgomery County, 11 miles southeast of Conroe, Allen Drilling Company staked Hines 1, T&NO Survey, Section 10, wildcat projected to 2500 feet.

Texas Permits

Drilling activity in Texas was on the decline last week when the Texas Railroad Commission authorized permits for drilling 119 wells in the state, 96 less than were permitted the week before.

Three permits were granted in the East Texas field, in Rusk County, while 2 locations were reported from the remaining part of the East Central Texas territory.

The commission approved the drilling of 18 wells in West Texas, and 15 in West Central Texas, while 24 permits were authorized in North Texas and 11 were approved in the Panhandle.

Southwest Texas led the state with 28 locations, and Gulf Coast operators listed 18.

Louisiana Gulf Coast

New Deep Lands Opened at Iowa and West Hackberry

New sands at Iowa, Jefferson Davis Parish, and West Hackberry, Cameron Parish, featured district operations. At Iowa, Magnolia Petroleum Company deepened Wait 9, Section 12-9s-7w, old producer near the center of the field, to 8204 feet, where a new sand flowed at the rate of 1560 barrels of 34-gravity oil daily through ⅛-inch choke from 35 feet of Oligocene or Jackson sand. The sand is the eleventh and deepest in the 10-year-old field, the former deepest pay being in Oligocene-Marginulina at 7027 feet. With this new sand, it is probable that per acre recovery at Iowa will be exceeded only, if at all, by Jennings, Darrow, Sulphur, Vinton, Leeville and New Iberia, as one operator estimates a 72,000-barrel per acre recovery without consideration of the effects of the new sand.

Stanolind Oil & Gas Company opened a new 9816-26-foot sand at West Hackberry, completing School Board 22, northwest edge well for 440 barrels daily through 5/32-inch choke, with tubing pressure 1300 pounds and casing pressure 1350 pounds. This test was drilled to 10,010 feet to establish a record for the field before plugging to discovery depth. The sand is the fourteenth in the field, other sands being in Pliocene and Miocene, with previous deepest on southwest flank at 6500 feet.

Bayou Pigeon, Tide Water Associated Oil Company's 1940 discovery in Iberia Parish, appeared on the verge of confirmation as that company's LeBlanc 1, Section 13-12s-10e, was cased to 8087 feet for test in the discovery sand at 8055-72 feet. A shallower sand with good possibilities was also found at 7513-19 feet, but will probably not be tested in this well. The discovery, McHugh Heirs 1, in the same section, was completed in March for 8 barrels of 35-gravity oil daily through 7/64-inch choke from 8052 feet.

Atlantic Refining Company's Kay Unit 1, farmout from The Texas Company in Section 23-3s-11w, Neale field, Beauregard Parish, provided interesting information on the dip of the sand body, finding the pay at 8375-90 feet, 21 feet lower than in the discovery or the three major extensions. Previous wells have found only a few feet of variance in the depth of the sand over a wide area. Martex Oil Company's Musser-Davis 1, a mile east of production, now drilling, will be closely watched for its effect on this outstanding 1940 discovery.

Fausse Point Flank Attempt Fails

Sun Oil Company admitted defeat after a number of attempts to establish west flank production in Planters 2, Fausse Point, Iberia Parish, and cemented bottom of hole preparatory to cutting and pulling casing. A 6300-55-foot sand was acidized with 1500 gallons without result.

To expedite exploration for flank sands, Superior Oil Company will drill three tests simultaneously at Bayou Bouillon, St. Martin Parish. The company rigged Rycade 2, Section 13-9s-8e, which with Rycade 1, and Iowa-St. Martin Land Company 1, now drilling, constitute an unusual method of flank exploration.

West of Melville, St. Landry Parish,

in Township 4s-6e, Amerada Petroleum Corporation took shooting option on 18,000 acres of Whitman Lumber Company land, with minimum selection of 3500 acres at $5 per acre. On Bastian Bay prospect, Plaquemines Parish, Phillips Petroleum Company was doing title work on a 30,000-acre block taken from Louisiana Land & Exploration Company on shooting option. This dome is the site of two deep failures drilled by The Texas Company. It was said that Danciger Oil & Refining Company will test the Church Point prospect, Acadia Parish, on a 2500-acre tract, farmed by Amerada Petroleum Corporation, centering Section 74-7s-2e. At Bayou Blue, Iberville Parish, Superior Oil Company was taking additional acreage on the west edge of the field after completing Schwing 3 for 175 barrels daily.

Gulf Refining Company's Allen Land Company 1, deep test on the flank of Golden Meadows dome, Cameron Parish, was abandoned at 11,954 feet. Gulf States Exploration Company may drill Pittsfield Plantation 1, wildcat in Section 42-8n-10e, Concordia Parish.

Geophysical Prospecting

Geophysical activity, reduced by recent storm and flood, as well as by several operator's unwillingness to explore public lands under the terms of Act 77, was at a low level. In Terrebonne Parish, Amerada had two reflection seismograph crews working the Dulac area, one in the southwestern part of Township 19s-17e, the other in northeastern Township 20s-17e. Shell Oil Company had a crew south of Gibson, in Township 17s-15e. Stanolind Oil & Gas Company and Barnsdall Oil Company had crews in the parish, the former in the Bayou Chene-Bayou Penchant area, Townships 17 and 18s-14e, the latter in Township 20s-11e. In St. Tammany Parish, west of Florenville, Humble Oil & Refining Company was doing reflection work. In the East Cote Blanche Bay district, St. Mary Parish, The Texas Company had a reflection crew, while Atlantic Refining Company was shooting in West Cote Blanche Bay. The latter company also had a crew in the Oakdale area of Allen Parish, 8 miles south of which Humble Oil & Refining Company was doing reflection work. Near Reddell, Evangeline Parish, Sun Oil Company was working two reflection crews. Cities Service Oil Company was shooting the Northeast Egan prospect, Acadia Parish. In the same parish, Shell Oil Company was shooting north of North Iota, Superior Oil Company was working north of Iota, Union Sulphur had a crew west of Iota, and Vincent & Welch were working the Bayou Mallet area. In Township 8s-1w, East Baton Rouge Parish, Walker & Green had a seismograph crew. Amerada Petroleum Corporation had a crew in the Mallard Bay area, Calcasieu Parish. Shell Oil Company was doing reflection work in Township 8s-7e, Livingston Parish.

Louisiana Permits

Thirty-nine drilling permits were authorized last week by the Louisiana Conservation Commission, of which 16 were in North Louisiana in the following parishes: Bienville 1, Caddo 10, DeSoto 1, LaSalle 2, and Union 2. The 23 in South Louisiana were in the following parishes: Acadia 1, Avoyelles 1, Calcasieu 2, East Baton Rouge 1, Iberville 2, Iberia 3, LaFourche 3, Livingston 1, Plaquemines 1, Rapides 1, St. James 1, St. Martin 4, Terrebonne 1, and Vermilion 1.

North Louisiana

Watch Deep Tests in Sabine And Claiborne Parishes

Two deep tests in North Louisiana were at interesting stages last week, one in the old Haynesville shallow field, Claiborne Parish, and the other on the south flank of the Sabine uplift in Sabine Parish.

In the old Haynesville field, discovered in 1921 and producing from the Blossom (Ozan) at 2800 feet, The Ohio Oil Company's G. W. Taylor 15, Account 1, Section 15-23n-8w, was drilling at 8830 feet, expecting the Smackover lime at around 9300 feet, after failing to find production in the lower Marine, productive in the Cotton Valley field. This test topped the lower Marine series at 7220 feet, and logged top of the Bodcaw at 7654 feet. A slight showing of gas was reported at 8636 feet.

On the south flank of the Sabine uplift, Shell Oil Company's Pickering Lumber Company 1, NE SW 30-4n-12w, a geophysical prospect, was drilling below 7500 feet.

One of the largest wells completed

"the job hasn't looked back"
That's the way one tool pusher describes a rotary drilling rig equipped with a Twin Disc Torque Converter . . . so far ahead of the old types of power transmission, it just can't look back because the job is being done easier, faster and better. Only one control—the engine throttle; no gears to shift; no stalling the engine; complete steam flexibility with internal combustion engine economy. Ask for the records . . . it's another Twin Disc, built-for-the-job triumph!
TWIN DISC
HYDRAULIC DRIVES
Twin Disc Torque Converter
Type: Lysholm-Smith
● Substantially increases delivered torque at low speeds.
● Cushions and absorbs all shock loads.
● No gears to shift . . . no clutches to slip.
● No adjustments needed.
TWIN DISC CLUTCH CO. • 1336 RACINE ST. • RACINE, WIS.

in recent months in the old shallow Pine Island field, Caddo Parish, North Louisiana's most active area, was brought in for 800 barrels of oil daily from 1691 feet by T. H. Smith at Hand-Schumacher 1, NE SW 18-21n-15w.

Location for a 6000-foot Travis Peak wildcat test was made near Athens, Claiborne Parish, by A. D. Veary at J. A. Harris 1, SW 17-19n-6w.

Bethany Test to Go 6000 Feet

Holcomb & Thomasson, of Shreveport, staked location for a 6000-foot test in the old shallow Bethany field, Panola County, Texas, just across the Louisiana line. Crenshaw 15 is located 1538 feet south and 1191 feet east NWc Thomas Cox Survey. It was in this survey that East Texas' deepest hole was drilled several months ago when The Texas Company topped Permian salt at 11,067 feet and drilled to 11,303 feet before plugging back and completing as a small gasser in the Glen Rose. It logged massive anhydrite at 4365-4537 feet, and topped lower Marine at 7792 feet.

Two Travis Peak wet gas wells were completed in the Waskom field, Harrison County, Texas, one by Arkansas-Louisiana Gas Company that opened the Glen Rose and Travis Peak for wet gas production, and the other by Union Producing Company.

J. M. Conner et al's J. C. Williams A-1, SE NE 3-15n-15w, Caddo Parish wildcat which perforated casing at 5120-5135 feet, tested only fresh water and a showing of gas, but later was reported to be showing some oil. It may install a pumping unit.

Mississippi

Tuscaloosa Sand Showing on Tinsley Dome North Side

Producing possibilities of the Tuscaloosa (Woodbine) sand on the north side of the Tinsley Dome field, Yazoo County, were center of attention last week after Union Producing Company's Powell 1, SE SW 36-11n-3w, logged two sand sections showing oil, and in the upper one had a showing of oil when formation tester was run. With elevation of 309 feet this test logged 10 feet of sand showing oil from 6021-31 feet, and in a 12-minute drill-stem test, with 3/8-inch chokes at top and bottom, recovered 1280 feet of oil and mud. Drilling and coring ahead the test logged 7 feet more saturation at 6114-21 feet and prepared to make a drill-stem test. This operation logged a showing of oil at 5576-86 feet in the Eutaw (Blossom) which was recently found productive on this end of the field.

Although the wildcat leasing play that was set off in Mississippi by discovery a year ago of oil at Tinsley Dome has somewhat subsided after more than six million acres of leases were taken, the leasing play now appears centered in southwest Alabama in Baldwin, Clarke, Mobile and Washington counties. Humble Oil & Refining Company has stretched its leasing into Florida, having recently taken approximately 250,000 acres in Escambia County, Florida.

There are still 52 geophysical units in Mississippi with 7 units working in Alabama. One mile east of the Mississippi line in Colbert County, northwest Alabama, Frederic F. Mellen and associates have spudded Alsobrook 1, SWc NW 10-4s-15w. W. D. Phillips of Bowling Green, Kentucky, is drilling contractor. This brings to four the number of tests drilling in Alabama, with another preparing to spud. Tests are drilling in Franklin, Marion and Mobile counties, with the one ready to spud in Fayette County. Deepest of the Alabama drilling operations is W. J. McClanahan's J. A. Stafford 1, SE NE SW 24-7s-3w, Mobile County, coring below 6600 feet.

Two new locations were made at Tinsley Dome, both being operations of Union Producing Company and both being located in northwest quarter of Section 19-10n-2w on the east edge of the field.

Two wildcat tests in Mississippi were abandoned last week, one in Monroe County, north Mississippi, and the other in Perry County in the southern part of the state.

Forty of the 67 oil wells at Tinsley Dome on August 1, 1940, were pumping. For the last week of July production for the seven-day period was 73,509 barrels.

For the same week the four wells in the Pickens field, Yazoo County, produced 6730 barrels of oil and 359 barrels of water.

Arkansas

Locate Smackover Test Southwest of Magnolia

Standard Oil Company of Louisiana last week made location for another geophysical Smackover lime deep wildcat test in Columbia County. The new test is Longino-Goode 1, NW SE 10-18-20, four miles southwest of the Magnolia field.

Two shallow wildcats in Clark County were abandoned, one a dry hole and the other being junked. One small oil well was completed in the Lewisville-Stamps field, LaFayette County, and the old shallow Smackover field, Ouachita County, added a small well.

Arkansas Permits

Four drilling permits were authorized last week by the Arkansas Oil & Gas Commission, as follows: Nevada County—Berry Asphalt Company's W. R. Mitchell 1, SE SW SE 4-14-20; Union County—Fohs Oil Company's J. A. Rowland 1, NE SE SW 31-17-14; McCreslenn Oil Company's J. C. Parker 4, SW NW SE 3-18-13; and Root Petroleum Company's C. T. Grace 1, SW NW SE 31-17-14.

Pressure Maintenance for Benavides Field Authorized

A permit has been issued to the Hiawatha Oil & Gas Company by the Texas Railroad Commission which will allow installation of a pressure-maintenance program for the Parr sand in the Benavides field. The new order provides that the allowables now assigned to wells to be used as gas injection wells may be distributed among other wells on the same lease.

An Apology . . .

With Reservations

We never would have guessed it from any experience of our own, but we understand from other sources that our customers are hard to please. Now and then one moves to an area we do not serve, and supply companies find him a bit critical of their ministrations. For which we apologize . . . but with no intention of changing our ways. We've been "spoiling" customers for 32 years.

PELICAN WELL TOOL & SUPPLY CO.

SHREVEPORT
LOUISIANA

PELCO

Houston
Greggton
Berwick
Houma
New Iberia
Magnolia

New Mexico

Greater Volume of Drilling Anticipated Rest of Year

Lea County listed 10 new tests the past week as compared to 6 the previous week. Greater volume of drilling activity is anticipated during the remainder of the year. Operators are likely to receive nominal increases in production allowables on the strength of growing demand for crude from trunk line outlets. The shifting of well connections from purchasers that were abundantly supplied to the facilities of those seeking more oil has paved the way for the raising of total nominations which have direct bearing on proration allowables.

Ventura Oil Company's Lowe 1, C SW SE 26-13s-37e, northeastern Lea County wildcat on a geological strike from the Wasson field in Texas, failed to encounter porosity in drilling to 5445 feet, and is considered near the water level. This prospect logged top of lime at 4610 feet, or 747 feet sub sea, indicating favorable structural position when correlated with a junked hole three miles west.

Eunice field recorded three new operations. The Texas Company's State-Lieu 23-H, an inside test, was drilling at 510 feet, and Cities Service Oil Company's Closson 3-B, near southwest edge of production, was also underway. Continental Oil Company's State 4-F, C NE NE 1-21s-36e, and the company's State 4-A-36, diagonal northeast offset in the Skaggs sector, rigged up late last week.

An east extension to the Vacuum field is sought by Great Western Producers' State 1-E C W½ SW NW 25-17s-35e. The closing down of drilling by Magnolia Petroleum Company for the time being with completion of State-Bridges 73 as a small well at 4716 feet, leaves The Texas Company as the only operator with considerable work projected. The latter has contracted for a number of wells on the south end of the field payable from production.

Three tests were authorized for the Maljamar field the past week, including two by Barney Cockburn et al, while R. W. Fair and C. M. Pope's Johns 1-B, C NW SE 26-17s-32e, is seeking a southeast extension. Helmrich & Payne's Corbin 2, C NE SE 9-18s-33e, offset to a small wildcat originally owned by The Texas Company, was drilling at 3550 feet.

In the Rhodes pool, The Texas Company et al's Rhodes 2-B is starting up as an east offset to recent extension completion by Anderson-Prichard Oil Corporation's Morris 1.

Rocky Mountain States

Extension Trys on Three Structures Near Objectives

On the Baxter Basin uplift in Wyoming, with three producing gas structures, an extension test on each structure is nearing objective horizons. On the Middle Baxter Basin structure, the Red Desert Corporation's Edith Asdpen 1, CNW SW NW 34-18n-103w, is coring in the top of its first objective the Sundance sand. Total depth is 3695 feet.

Near Rock Springs, Gus Pongrat's Clark 1, NE NE NE 22-19n-104w, an extension to the North Baxter Basin field, is coring at 3715 feet in green shale, probably the base of the Morrison, and near the top of the Sundance.

Union Gas Company's Hummer 1, NW NW NE 6-17n-103w, an extension of South Baxter, is drilling at 2110 feet in the lower Frontier section which contains gas sands.

All three extension tests are down structure and anticipate possible oil production in the sands carrying gas up-structure. Should oil be encountered in any one of the three tests, it would open up a vast potential acreage on the Baxter uplift within a few miles of Utah Oil & Refining Company's 421-mile pipe line across southern Wyoming to Salt Lake City.

Twelve miles west of the LaBarge field, M. R. Taylor is drilling in hard lime formation of the Park City at 2040 feet in Government 1, NEc 36-25½n-115w, wildcat on the Wyoming Anticline structure. Objective is the Embar lime expected within the next few hundred feet.

In Moffat County, northwestern Colorado, Mountain Fuel Supply Company is testing through perforations in Georgia Kuykendall, C SW NW SW 23-12n-100w, Hiawatha field. Testing is opposite the second sand at 2311-2354 feet. Casing is set on bottom at 2584 feet. The well failed to yield production from the first, third,

Strength plus Flexibility

The Grizzly Pressure Seal Coupling—one of the important developments in rotary hose engineering—eliminates leaks at any pressure, cutting out of nipples, and coupling troubles. For detailed construction features, write for Bulletin No. 20-OF.

Grizzly Pressure Seal Rotary Hose is a remarkable combination of steel and rubber—*strength and flexibility*. Heavily steel armored throughout its entire length, it actually embodies the full strength of this steel—*more than ample* to withstand without injury *higher pressures* than might be developed under *any drilling conditions*. Its extraordinary flexibility, obtainable only by the exclusive Grizzly method of fabrication is clearly shown by the illustration below—a 50-foot length of Grizzly 3-inch rotary hose snaked out on the shipping room floor where the adapter is to be installed and the complete unit prepared for shipment. Note there is no kink or strain at any point throughout the entire 50-foot length . . . This extraordinary *strength plus flexibility* is your assurance against hose troubles, frequent repairs and replacements, and excessive hose costs. Ask your supply dealer, or write direct for more detailed information.

E. M. SMITH COMPANY
600-650 South Clarence St., Los Angeles, California, U. S. A.
Complete Stocks Maintained in Our Warehouses at:
1121 Rothwell St., Section 16, Houston, Texas. 1008 S. E. 29th St., Oklahoma City, Okla. 1621 East Yellowstone, Casper, Wyo.
Export Office: Continental Emsco Co., 30 Rockefeller Plaza, New York City
Distributed by Leading Supply Companies

GRIZZLY PRESSURE SEAL ROTARY HOSE

and fourth sands. Good progress is reported from The Texas Company and The California Company's Unit 4, SWc 2-2n-94w, test to the Morrison formation in the Wilson Creek field. Deep test of the Hamilton Dome field, The Texas Company's Wick 2, Lot 9, 10-4n-91w, an old well deepening from 3935 feet, is drilling at 4180 feet.

In the northeastern corner of Utah, the Mountain Fuel Supply Company's R. D. Murphy 5-B, C SW NE SW 15-34n-24e, Clay Basin field, Daggett County, is drilling at 4977 feet.

California

Newhall Wildcat Gets Third Zone; Kern Test to Pump

Coring at 6527 feet, R. E. Havenstrite has apparently picked up the third zone in Lincoln 1, wildcat in Section 16-4-17, Los Angeles County, Newhall area. Cores check closely with cores taken from the third zone in the Newhall-Potero field by Barnsdall Oil Company two miles to the northwest. The first and second zones in the Newhall-Potrero field were blanked off by Barnsdall Oil Company, due to high gas ratios. An oil sand was encountered at 6030-6180 feet, now believed either the first or second zone as identified in the Newhall-Petrero field. Whether more than one zone was drilled through before reaching what is now believed to be the third zone is not known by the operator. Havenstrite has 1500 acres of land under lease in the neighborhood of the well. Only other close-in acreage is held by Standard Oil Company of California with 600 acres, and Universal Consolidated Oil Company with 40 acres.

Signal Oil & Gas Company has excavated sump and is rigging pump preparatory to placing Vedder-Glide 1, wildcat in the Mount Poso area of Kern County, Section 29-27-28, on production. Bottomed at 2314 feet, water string was set at 2297 feet at top of the Vedder zone. A quantity of 15.5-gravity oil was bailed from the well.

Tide Water Associated Oil Company will abandon the lower portion of the hole in Daniel 35, deep test in the Trico-Alpaugh area of Tulare County which was carried to 11,728 feet. Location is in Section 22-24-23. Operator may plub back to a gas zone topped at 2440 feet. Formation test run at 10,755-900 feet, open 40 minutes, resulted in a faint blow with recovery of 7200 feet of salt water. Top of the Vedder was placed at 10,315 feet, and top of the Olcese at 9425 feet.

The Texas Company found the Vaqueros zone wet in Bishop A-1, wildcat in Section 13-4-29, Elwood area, Santa Barbara County. Bottomed at 4350 feet in barren Sespe sand and shale, top of the Vaqueros was placed at 3305 feet and top of the Sespe at 3760 feet. Hole is being abandoned.

Preparations are being made by Superior Oil Company to abandon Riggs 1, deep test in Section 21-28-25, Kern County, Rio Bravo area, which determined the north limits of production in the Rio Bravo field. Bottomed at 12,324 feet, the well topped the Rio Bravo sand at 12,257 feet and found it wet.

R. R. Bush Oil Company's Sentous 1, deep test in the Inglewood-Baldwin Hills area of Los Angeles County, bottomed at 8439 feet, recovered approximately 40 stands of oil in drill pipe, 31-gravity, on formation test, and was standing cemented with water string set at 8325 feet. Gas blow reached surface 2 minutes after tester valve was opened, and recovery was made in 1 hour, 20 minutes.

Michigan

Five Starts in New Clare County Field; to Lay Line

Two tests were spudded and three other locations surveyed in Hamilton Township, Clare County, following Sun Oil Company's strike at McKenna 1, SE SW SE 15-19n-3w, which flowed 1503 barrels natural when completed August 10. However, concern was rising last week after the discovery well virtually quit flowing after the fourth day on production. Operators believed that swabbing had damaged the packer, in which the 5-inch producing string was set, permitting water from the upper Traverse to get in on the pay. Well was tubed last week, and operators planned to run sucker rods and test before considering acidizing.

McKenna 1, hailed as the basin's biggest wildcat development since 1938, flowed from Monroe at 3753½ feet, 1260 barrels in the first 21 hours, and 1503 barrels the second day, 1437 barrels the third day, 1327 barrels the fourth day, 396 barrels the fifth day, 197 barrels the sixth day, 92 barrels the seventh day, and 86 barrels the eighth day.

Sun Oil Company had set surface pipe for rotary August 19 on MacGregor 1, east offset to the discovery, and staked two other locations, one ½ mile southwest and the other a diagonal southwest offset. Gordon Oil Company surveyed Wilson 1, CS½ NE NE 15, ½ mile north of the discovery, and Freeman Oil Company was ready to spud Price 1, CN½ SE NW 28, ¾ mile southeast.

Simrall Corporation was clearing right-of-way for a 14-mile 6-inch pipe line from McKenna 1 to the company's Beaverton pump station, which will give the pool direct pipe-line delivery to several major Michigan refining markets as well as Toledo, Ohio. Simrall Corporation was transporting crude from the discovery via truck and pipe line to Toledo for Sun Oil Company's refinery at that point. No price has been posted for the area, but it was expected to go up at 98 cents, equal to Freeman-Redding grade. Gravity of crude from the discovery was established at 39.1 with a sulphur yield of 1.64 percent, which is comparatively high. Excepting Freeman-Redding grade, most basin crudes yield less than 1 percent sulphur.

Through an error in the original survey, it was discovered when the offset was made that the McKenna discovery is on a 10-acre location, 330 feet from the east and 990 feet from the north lines of the quarter-section. The location had been carried by Sun Oil Company, the state and the industry as a 20-acre location, 660 feet from the east and west lines and 990 feet from the north line. Sun Oil Company staked the offset as a 20-acre location and announced intention to drill only 20-acre locations in the field.

Rains Hinder Drilling

Combination of intense rains that washed out mud pits and inability to get drilling mud properly equalized, resulted in two blowouts in the Adams play, Arenac County, and shutdowns on two other rotary jobs.

Five rotaries and two cable-tool rigs were running in Adams, besides five other locations, with the first follow up completion to Rayburn's discovery now not due before a week. Deepest was Smith Petroleum Company's Stone 1, Section 14-19n-3e, ½-mile northeast of the discovery, making slow time at 2630 feet with about 200 feet to reach the Dundee casing point.

Estimated drilling time of 12 to 15 days for rotary in the Adams play probably will not be reached by the first three starts due to the trouble which developed this week in the Traverse. Adams has a 400- to 500-foot section of Traverse, streaked with chert, which carries water up to 250 barrels per hour. Two rotary operations washed out at the 2200-2400-foot level. Ordinarily, about 9.9- to 10.3-pound mud is carried in the Traverse. Increased to 10.9 pounds or better, it held back water but virtually cushioned the bit to a point that little hole could be drilled.

Two wildcats in Southwest Michigan's shallow Traverse play logged possible commercial pays last week. Alfred Urion's Antonson 1, SE SE SE 34-1n-16w, Casco Township, Allegan County, swabbed 75 barrels gross in 16 hours after acid at 1115 feet. Fisher-McCall, Inc.'s Van Single 1, NW NE NW 2-6n-13w, Ottawa County, topped Traverse at 1771 feet and bottomed at 1792 feet with 500 feet of oil in 10 hours. Operators planned to acidize.

Gulf Refining Company's Bateson 1, Section 2-14n-4e, Bay County, projected 9000-foot test to the St. Peters sand, was milling at 3570 feet on 311 feet of 2½-inch upset tubing, dropped in the hole several months ago. Attempts to get hold with an overshot failed. Once tubing is fished out, 8-inch casing now set at 3600 feet will be pulled before actual new-hole drilling is started.

Order Encourages K-M-A Gas Injection Program

The Texas Railroad Commission has revised its orders for the K-M-A field, Archer and Wichita counties, to encourage a gas injection program.

The new order, issued August 14, will permit operators to produce from other wells on the same lease the oil allowable now being produced from a well which is converted into a gas injection well.

UNITED STATES WELL COMPLETIONS

Arkansas

Clark County (Wildcats)—
J. H. Coker & J. P. Grieves, Mc-Clelland 1, 11-10-21 ..... * 1603
William S. King, Ross 1, 3-10-21.. † 2607
La Fayette County (Lewisville-Stamps)—
Erwi & Leach et al, Bodcaw Lbr. Co. 2, 19-16-23 ..... 200 3451
Ouachita County (Smackover)—
Sam M. Richardson, Goodwin B-2, 32-15-15 ..... 60 3210

California

Fresno County (East Coalinga Eocene)—
Robert S. Lytle, No. 88-18F.....1572 7921
Standard, 62-19F 471 7837
Fresno County (Kettleman Hills)—
Union Oil, Amerada-King 9..... 314 10,914
Kern County (Cole's Levee)—
Richfield, KCL-A 36-28..... 656 9200
Kern County (Greeley)—
General Pet. Corp., Wallace 1.... 486 11,512
Kern County (Round Mountain)—
Trico O. & G. Co., Coffee 1..... * 1578
Kern County (Ten Sections)—
Shell, KCL A-2-30.....2000 8200
Orange County (Huntington Beach)—
Southwest Explor. Co., State 30.... 275 4500
Los Angeles County (Dominguez)—
Shell, Reyes 108..... 238 4345
Union, Carson 14..... 347 8095
Los Angeles County (Wilmington)—
Hancock Oil Co., No. A-19..... 725 3345
V. R. G. Wilbur, Kreiger 4..... 190 3710
Ventura County (Ventura Avenue)—
Tide Water, Hartman 19..... 13 7308

Illinois

Bond County—
Paul Doran, Jett 1, ne sw se 9-6n-2w ..... * 1062
National Pet. Co., Spindler Inv. Co. 1, nw nw nw 10-6n-2w 209 1026
W. E. Henderson, Hargood 1, cne ne sw 36-7n-4w ..... * 475
Clay County—
Schulman Bros., Hardy 1, ce½ ne ne 16-3n-7e ..... * 2980
Clinton County—
Hughes Pet. Co., Hohman 1, se ne se se 10-2n-1w ..... * 3053
Morgan, Ellison 3-D, se nw sw sw 35-2n-1w 834 2915
Adams O.&G., Copple 23-D, ce½ se sw 35-2n-1w 1081 2898
Felton 4, se ne ne nw 1-1n-1w ... 50 1350
Shell, Criley 16-D, ne sw nw ne 2-1n-1w 696 2912
Criley 18-C, ce½ ne nw 2-1n-1w..2400 2912
Ford et al, Brink 1, sec sw se 3-1n-2w ..... * 1320
L. L. Benoist, Knolhoff 4, sw nw ne nw 11-1n-2w 50 1324
Knolhoff 5, nwc ne nw 11-1n-2w. 60 1324
Max Pray, Monken 1, nec sw nw 11-1n-2w 125 1327
Coles County—
Harr & Hawley, Pinnell 1, se nw se 6-11n-14w ..... * 2460
Fayette County—
Ohio, Schwarm 15, nw se se 36-6n-2e 60 1612
Williams 8, ne sw se 36-6n-2e.... 54 1617
Texas, Neathery 8, nw nw ne 6-6n-3e 196 1566
Neathery 9, sw nw ne 6-6n-3e.... 266 1542
Wright 11, se nw sw 31-6n-3e.... 280 1610
Nash Redwine, Rhodes 1, se ne ne 3-7n-3e ..... * 1700
Carter, Kimbrell 4, se sw sw 8-7n-3e 168 1568
Miller 1, nw ne sw 1-8n-3e 29 1494
Wood 1, sw se nw 10-8n-3e..... 138 1542
Taylor-Doty 2, se sw se 12-8n-3e. * 1602
McClain 4, se se se 32-8n-3e..... 948 1483
Taylor 5, ne nw sw 33-8n-3e..... 504 1592
Hamilton County—
Exchange Oil Co., Friel 1, nwc ne se 34-5s-6e 500 2966
Kingwood, Morris 1, sw se ne 34-5s-6e 353 3120
Iroquois County—
Whitlow, Gannon 1, nw ne sw se 5-27n-12w ..... * 1485
Macoupin County—
Adams & Laegers, Cole 1, se ne nw 2-10n-6w ..... * 740
Marion County—
Menhall, Kerhman 1, sec nw nw 4-1n-3w ..... * 1031
Texas, Centralia 54, se sw ne ne 5-1n-2e 650 3513
Centralia 55, swc ne ne 5-1n-2e... 204 3488
Corbin 11, sw nw nw nw 5-1n-2e.. 266 2178
Johnson 34, nw sw sw 5-1n-2e.... 349 3410
Johnson-Hawkins 2, se ne sw sw 5-1n-2e 375 3424
Richardson-Hawkins 2, cn½ sw 5-1n-2e 670 3415
Bundy 12, cw½ sw ne 6-1n-2e... 406 3456
Johnson 32, nw se se 6-1n-2e..... 250 3397
Johnson 33, e½ se se 6-1n-2e... 240 3397
Carr 8, ne sw ne ne 7-1n-2e..... 305 3420
Carr 9, e½ ne ne 7-1n-2e..... 289 3417
Richardson 7, nw se nw ne 7-1n-2e 1279 3439
Carr 9, w½ nw nw 8-1n-2e..... 700 3436
Carr 10, nw sw ne nw 8-1n-2e ... 400 3442
Centralia 67, nwc ne nw 9-1n-2e.. 175 1921
Hamlin 7, nw ne 4-2n-2e..... 85 2144
Stroup 23, nwc se nw 31-2n-2e... 300 2310
Stroup 28, sw se sw nw 31-2n-2e. 782 3472
Tate 22, nwc se sw 31-2n-2e..... 606 3493
Tate 23, sec nw sw 31-2n-2e..... 495 3485
Stonecipher 22, nw sw sw se 32-2n-2e 80 2380
Stonecipher 23, nw se se sw 32-2n-23 ..... 172 2323
Williams 26, se sw sw 32-2n-2e.. 148 2278
Williams 27, nw sw sw sw 32-2n-2e 150 2265
Centralia 62, se sw se sw 32-2n-2e 100 1865
Lazaretti 9, sw sw sw 33-2n-2e.. 306 2376
Tex Harvey, Kagy 12, cnw se se 33-3n-2e 400 3545
Jones & Jones, Ross 1, nw nw nw 27-2n-1e ..... * 1895
Monroe County—
Cummings et al, Boyer 2, se sw se 19-1s-10w ..... * 2270
Montgomery County—
Henderson Bros, Arling 1, nwc sw nw 30-10n-4w ..... * 552
Babler Inv. Co., Street 1, nw nw se 31-11n-5w 45 613
Brown & Hausman, Haynes 1, se nw sw 32-11n-5w ..... * 625
Grant & Tharpe, Wood 3, sw nw nw 32-11n-5w ..... * 655
Perry County—
Blankenship, City Par 1, ne ne se 13-5s-3w ..... * 2942
Carl Robinson, Gruner 1, nec nw se 14-5s-3w ..... * 1722
Randolph County—
Christian & Wagoner, Waltemater 1, cnw ne 25-7s-6w ..... * 1024
R. H. Anderson et al, Cassoutt 1, sw nw sw 16-7s-7w ..... * 1698
Richland County—
Dekalb, Schilling 5, cs½ sw se 32-4n-9e 62 2615
Shelby County—
C. W. Lemax, Nelson 1, sec sw ne 20-10n-1e ..... * 1355
St. Clair County—
Sklar Oil Co., Dyroff 34, ne ne se 28-1n-10w 95 500
Skye & Benson, Mussette 1, se nw ne 28-1n-10w 40 525
Shaffer et al, Mueller 3, se nw sw 34-1n-10w 10 690
Wabash County—
Findlay et al, Guisewite 2, ne sw sw 3-1n-13w ..... * 2761
Burr Lambert, Seller 1, ne ne ne 34-1s-13w 385 2628
Longhorn, Hell 12, sw ne sw sw 7-3s-13w 50 2884

[*Continued on next page*]

Summary of Drilling Operations in the United States, Week Ended August 24, 1940

	WELLS COMPLETED							*PERMITS FOR NEW WELLS				
	Completions	Oil Wells	Gas Wells	Failures	Initial Production	Total 1940	Total this Date 1939	This Week	Total this Month	Total 1940	Total this Date 1939	Year Total 1939
Alabama	.....	.....	.....	.....	.....	3	1	.....	.....	.....	.....	.....
Arizona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Arkansas	4	2	.....	2	260	124	159	4	9	96	155	223
California	13	12	.....	1	7,287	735	693	16	74	703	678	1,174
Colorado	.....	.....	.....	.....	.....	5	15	.....	.....	.....	.....	.....
Florida	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
Georgia	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Illinois*	91	68	.....	23	23,000	2,592	2,474	92	339	2,960	.....	893
Indiana	18	9	3	6	2,165	293	112	.....	.....	.....	.....	.....
Kansas	37	30	1	6	54,527	1,277	906	41	155	1,327	1,005	1,583
Kentucky	12	6	.....	6	450	216	426	.....	.....	.....	.....	.....
Louisiana	27	20	.....	7	5,657	1,103	681	39	106	1,042	858	1,449
Michigan	22	5	1	16	340	819	935	24	81	744	916	1,419
Mississippi	2	.....	.....	2	.....	122	7	.....	.....	.....	.....	.....
Missouri	5	.....	2	3	.....	13	.....	1	4	4	.....	.....
Montana	1	.....	.....	1	.....	118	92	1	1	1	.....	.....
Nebraska	2	1	.....	1	387	8	1	1	7	7	.....	.....
New Mexico*	7	5	.....	2	765	466	411	8	39	413	56	293
New York†	16	16	.....	.....	46	687	373	.....	.....	.....	.....	.....
North Dakota	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ohio	32	13	12	7	169	595	594	.....	.....	.....	.....	.....
Oklahoma	45	32	.....	13	7,854	1,418	1,370	28	152	1,213	1,370	2,059
Pennsylvania†	92	82	5	5	103	2,313	1,030	.....	.....	.....	.....	.....
South Dakota	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
Tennessee	.....	.....	.....	.....	.....	8	.....	.....	.....	.....	.....	.....
Texas	160	121	8	31	54,829	6,828	6,471	119	675	7,610	6,937	10,269
Utah	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....
West Virginia	11	3	7	1	46	362	343	.....	.....	294	417	718
Wyoming	5	2	.....	3	4,867	94	91	.....	.....	.....	.....	.....
Total this week	602	427	39	136	162,752	20,203	17,173	374	1,642	16,414	12,382	20,080
Total last week	579	397	43	139	184,931	19,601	16,690	503	1,268	16,040	12,029	20,080
Total this year	20,203	14,755	1,090	4,358	7,320,183	.....	.....	.....	.....	.....	.....	.....

* This tabulation includes those states where weekly data are available; figures for Illinois date from October 15, 1939; New Mexico from August 1, 1939. Data for Kansas, Missouri, Montana, Nebraska and New Mexico are first reports of new wells, rather than actual permits.
† Includes water-input wells.

United States Well Completions—*Continued*

ILLINOIS—Continued

Washington County —

Company, Well and Location	Init. Prod. Bbls.	Depth
Magnolia, Tiemann 5, nw nw sw 23-1s-1w	91	1543
Shell, Brown 1, sw se nw 23-1s-1w.	243	1553
Wayne County—		
Pure, Atterbery 1, cs½ sw sw 28-2n-8e	181	3068
Brissendon 2, ce½ nw se 32-2n-8e	1106	3105
Oil Well Dr. Co., Lawrence 2, s½ sw se 34-1s-7e	30	3267
Weinert, McPherson 8, cw½ sw nw 3-2s-7e	360	3250
H. Scott, Cornick 1, ne sw sw 4-2s-7e	400	3308
White County—		
Superior, Fitton 3, sw ne ne 27-4s-14w	28	2203
Sun, Greathouse 5, ne nw nw 4-5s-14w	75	2914
Eason Oil, Rebstock 1, se se sw 11-6s-9e	87	2271
Storms 3, ne sw se 11-6s-9e	310	2248
Storms 4, sw ne se 15-6s-9e	142	2256
Exchange & Ohio, Rudolph School 4, nw se se 11-6s-9e	77	2251
Parker Dr. Co., Phelps 1, se nw nw 14-6s-9e	•	2256

Indiana

Daviess County—

Company, Well and Location	Init. Prod. Bbls.	Depth
C. P. & H. Dr. Co., Hunt 1, se sw sw nw 4-2n-5w	9	589
Newton Pipeline, Connelly 1, se se ne 33-2n-6w	¶.75	2210
Gibson County—		
United Pet., Turpin 1, sec nw sw 4-2s-10w	•	1104
Lewis Prod. Co., Dunn 2, sw nw se sw 18-3s-13w	200	2098
Joe Bander, Cooper 8, w½ nw ne 13-3s-14w	68	2499
Bander et al, Cooper 34, sw sw ne 13-3s-14w	233	2884
Hall Edwards, Rec., Maier 8, ne sw nw 13-3s-14w	440	2861
Maier 9, sw se se 14-3s-14w	500	2865
Knox County—		
Richter & Scott Cain, Montgomery 1, cne sw 28-5n-7w	•	2439
Perry County—		
Persise & Wyman, Griner 1, ne sw se se 13-4s-2w	•	2439
Posey County—		
Ray Ryan, Keck 4, sw nw 34-3s-14w	82	2815
Keck 5, swc nw nw 34-3s-14w	112	2818
Superior Oil, New Harmony Realty 27, nwc sw se 8-5s-14w	•	2978
Gulf Ref., Schroeder 1, nw ne se 5-6s-12w	¶1.0	731
Gulf Oil, Maier 1, se nw ne 7-6s-12w	80	1196
Spencer County—		
Gulf Oil, Federal Land Bank 2, ne nw 32-7s-6w	¶.17	650
Schnell Trs. Biggerstaff 2, ne sw sw se 6-7s-7w	•	1042
Vigo County—		
H. N. Oakley, Simmerton 1, sw se se 19-13n-8w	•	1650

Kansas

Barton County—

Company, Well and Location	Init. Prod. Bbls.	Depth
Black-Marshall, Hoffman 1, nec se 13-16-12w	3000	3304
Robertson et al, Miller 1, cw½ sw ne 4-16-14w	•	3433
Buchanon et al, Langfelt "B" 1, cn½ se sw 14-20-11w	3000	3390
Gulf, Kasselman 2, cn½ se sw 23-20-11w (otd 3279)	3000	3284
Kasselman 3, cs½ ne sw 23-20-11w	2357	3278
Lario et al, Zahorsky "B" 4, cs½ sw ne 23-20-11w	3000	3276
Cowley County—		
Hawkeye, Byers 4, cw½ ne nw 21-32-5e	1157	3079
Douglas County—		
Goff, Nies 1, c ne sw 3-13-21e	¶0.25	700
Ellis County—		
Ryan, Bemis "A" 7, cwl sw ne nw 22-11-7w	2316	3418
Lario, Marshall 8, ce½ ne sw 31-11-17w	2564	3668
Shell, Riddler "A" 2, nw sw nw 12-11-18w	3000	3507
Hall, Oswald "C" 4, se sw ne 11-12-16w (pb 3130)	1102	3414
Carter, Weisner 2, cn½ sw se 11-12-18w	16	3723
Ellsworth County—		
Cities Service, Essick 1, nec 25-16-8w	•	3512
Wentz, Sebesta 1, cn½ se nw 6-16-10w	•	3366
Beardmore et al, Talsky 3, cw½ se ne 8-16-10w	3000	3302
Elwell et al, Horejsi 1, cn½ nw sw 17-16-10w	622	3375
Palmer et al, Stoltenberg "B" 2, cn½ se nw 27-16-10w	3000	3213
Pryor & Lockhart, Strattman 4, ce½ nw nw 1-17-10w	•	3315
Greenwood County—		
McFann et al, Demler 1, nw ne ne 23-23-10e	10	2085
Whittaker, Adams 2, se sw nw ne 17-28-11e	50	1229
McPherson County—		
Stelbar, Jones 2, ce½ nw ne 19-17-1w	1404	2686
Tulsa Oil Corp., Mattson 3, cs½ ne sw 19-20-5w	3000	3308
Phillips County—		
Hess & Son, Donaldson 1, ce½ se ne 25-5-18w	•	3155
Pratt County—		
Skelly, Krehbiel "A" 3, cwl nw ne ne 25-27-11w	625	3477
Reno County—		
Lloyd-Frost & Study, Haury 1-A, cwl nw ne sw 1-23-4w (otd 3397)	40	3512
Russell County—		
Stanolind, Kein 5, cn½ ne nw 25-14-14w	450	2305
Michel "B" 4, ce½ ne nw 36-14-14w	970	2940
Carter, Josephine 5, cn½ ne se 7-15-13w	255	3259
Shields, Rogg 3, cs½ sw nw 9-15-13w	1810	3030
Skelly, Neidens 16, cwl sw ne se 32-15-13w	2380	3336
Stafford County—		
Cities Service, Smith "B" 2, se nwc se 16-21-11w (otd 3417)	399	3390
Simpson et al, Hahn 1, ce½ se ne 10-22-13w	•	3790
Stanolind, Hitz 6, ce½ se nw 2-22-12w	3000	3558
Hartnett 8, csl se nw nw 13-24-11w (otd 3778)	3000	3815
Sinclair Prairie, Krey 2, nwc ne 14-24-11w (otd 3788)	30000	3826
Stanolind, Charles "A" 1, cn½ ne se 15-24-12w	3000	4004

Kentucky

Brackenridge County—

Company, Well and Location	Init. Prod. Bbls.	Depth
G. W. Kleinbocker et al, Beasley 1.	•	533
Butler County—		
W. B. Phillips, Gardner 1	10	436
Daviess County—		
Master Oil Co., Richmond 7	•	1280
W. E. Hupp, Stephens 1	5	1397
Baldwin Oil Co., Ingleheart 1	35	1713
J. C. Miller et al, Nally 1	•	1741
Simon Lebon, Tyler 7	5	999
Hancock County—		
W. J. Flescher, Burke 2	20	329
Henderson County—		
Niagara O. & G., Knight 9	•	719
O. J. Connell, Cooksey-Bennett 1	375	1508
Ohio County—		
D. T. Bolling, Hamilton 1	•	926
E. Dehart, Bartlett 4	•	460

North Louisiana

Bossier Parish (Bellevue)—

Company, Well and Location	Init. Prod. Bbls.	Depth
T. G. Shaw, Tr., Mehaffey 1, 27-19n-11w	•	3003
Caddo Parish (Pine Island)—		
W. C. Curry, Spell et al 1, 28-21n-15w	15	1543
Khourey & Zwan, George 1, 12-20n-16w	75	1512
T. H. Smith, Hands-Schumacher 1, 18-21n-15w	800	1691
Thomas & Mack, Burton 2, 1-20n-16w	15	1525
Charles Wapler, First Meth. Church 1, 12-20n-16w	55	1530
La Salle Parish (Olla)—		
Arkansas Fuel Oil, Mills 1, 13-10n-2e	160	2257

South Louisiana

Bayou Blue—

Company, Well and Location	Init. Prod. Bbls.	Depth
Superior, Schwing 3	175	5100
Belle Chasse—		
California, Delta Minerals 1-5	486	7490
Charenton—		
Brown, Katerane 1	•	8152
Eola—		
Gulf, Moullere 5	559	8557
Richardson, Haas 2	220	8622
Garden Island—		
Texas, State 46	450	4453
Golden Meadows—		
Brown & Woods, LeFort 2	192	5220
Hargrove, School Board 2	372	5490
O'Dwyer, Lafourche Realty 5	240	5583
Texas, Falgout Holding 17	249	5160
Grand Bay—		
Gulf, State 17 QQ (wo)	812	9926
New Iberia—		
Helis, Bolivar 2	•	1512
North Convent—		
Arcadia, Celestine 1	•	2413
Port Barre—		
McDannald, Sibille 2	lcn.	abnd
University—		
Sugarfield, Haas 1	•	7300
Nicholl 3	263	6815
Valentine—		
Helis, Valentine 7	145	7568
Ville Platte—		
Continental, Haas 1 (wo)	270	8941
Hughes, Pitre 1	104	10,015
East Baton Rouge Parish—		
Golding & Farris, Paulet 1, McInnis prospect	•	7512

Michigan

Allegan County—

Company, Well and Location	Init. Prod. Bbls.	Depth
E. O. Lucas, Wood 1, se sw ne 4-2n-13w	•	1553
Union Oil Co., Stankey 1, ne se sw 23-4n-12w	•	1681
Merrill & Dean, Raymond 1, nw ne nw 26-2n-16w	•	1202
Clapsaddle & Harris, Jipping 1, nw nw nw 10-3n-14w	•	1582
Weller & Dapar, Lankheet 1, nw se ne 1-4n-14w	•	1638
H. C. Nelson, Peters 2, se nw sw 9-4n-14w	100	1487
Wolverine Nat. Gas Co., McLaughlin 1, ne sw ne 9-2n-12w	•	1830
Arenac County—		
W. E. Ross, Berry 3, cnw se 9-20n-4e	¶0.5	1201
Cass County—		
Schurtz & Prathers, Pullin 1, sw sw nw 14-5s-14w	•	1150
Genesee County—		
Lewis Burr, Hermann 1, sw sw nw 13-6n-5e	•	2493
Isabella County—		
Cryden Pet. Co., Miller 1, nw sw sw 20-15n-6w	•	3780
Twin Dr. Co., Methner 1, nw sw ne 33-16n-3w	•	3768
Kalamazoo County—		
M. L. Morton, Kline 1, sw se ne 29-4s-12w	•	1183
Kent County—		
E. R. Roach, Hunsburger 1, se se sw 28-8n-11w	•	2207
W. H. Clock, Terewlin 1, nw nw nw 30-7n-12w	60	1917
Smith Pet. Co., Livingstone 5, nw se se 32-7n-12w	75	1789
Missaukee County—		
Century O&G Co., Anderson 1, se se sw 14-22n-8w	•	4054
D. E. Hughes, Herringa 1, ce se se 21-21n-8w	•	4015
Osceola County—		
C. L. Maguire, Inc., Armstrong 1, cs sw nw 23-18n-7w	•	4031
Ottawa County—		
Bell-Marks, Inc., Grasmeyer 1, se se nw 25-6n-14w	•	1767
Mesel & Spielberg, Lipski 5, nw se sw 14-7n-13w	25	1876
Smith Pet. Co., Fenske 3, ne se nw 34-7n-13w	80	1870

Mississippi

Monroe County (Wildcat)—

Company, Well and Location	Init. Prod. Bbls.	Depth
Willmut G.&O. Co., Rye 1, 22-15s-17w	•	2746
Perry County (Wildcat)—		
Fohs Oil Co., Bond Lbr. Co. 1, 17-1s-11w	•	7600

Missouri

Adair County—

Company, Well and Location	Init. Prod. Bbls.	Depth
Ettington et al, Clark 1-A, nec se 8-63n-14w	•	1247
Caldwell County—		
Skelly, Arnote 2, cne nw 36-55n-29w	¶3.5	410
Hutchings, Fowler 1, ne se sw 36-55n-29w	•	455
Skelly, Arnote 3, cse ne 36-55n-29w.	¶1.8	408
Randolph County—		
Gallamore et al, Buckler 1, csw nw 22-52n-14w	•	1185

Montana

FIRST REPORT

Toole County—Montana Gas Corp.'s Nelson 1, cse ne 12-35n-1e, rig, South Bow & Arrow structure.

COMPLETION

Choteau County—Security Petroleum Co.'s Johnson 1, cne ne 23-26n-3e, Genou structure, sulphur water Madison lime, abnd 2225 ft.

Nebraska

Richardson County—

Company, Well and Location	Init. Prod. Bbls.	Depth
Pawnee Royalty Co., Bucholtz 1, cnw sw 17-1n-16e	387	2232
Shaffer et al, Boose 2, cse nw 16-1n-16e	•	2393

New Mexico

Eddy County (Wildcat)—

Company, Well and Location	Init. Prod. Bbls.	Depth
Sanders Bros. et al, De Temple 1, cnw nw 27-19s-31e	•	2763
Eddy County—		
Continental-S. P. Yates, Brainard 4, se ne ne 3-18s-29e	122	2741

United States Well Completions—*Continued*

Company, Well and Location	Init. Prod. Bbls.	Depth
NEW MEXICO—Continued		
Lea County (Maljamar)—		
Carper Dr. Co., Simon 2, cse ne 29-17s-32e	200	3810
Maljamar O&G Corp., Baish 12-A, csw sw 21-17s-32e	200	4018
Lea County (Vacuum)—		
Magnolia, State-Bridges 72, cse se 11-17s-34e	51	4728
Texas Co., State 2-W, cnw se 13-17s-34e	192	4700
Luna County (Wildcat)—		
O. D. Berry et al, Berry 2, sec sw 33-22s-10w	•	1187
New York		
Allegany County—		
Sandy Oil Co., Welch farm, Bolivar	7	1580
A. L. Shaner, Parker farm, Bolivar	5	1392
Riley Allen Est. No. 1, Allen farm, Scio	7	1047
Ford Oil Co., Margeson farm, Alma	7	1320
Hopkins, Short Bros. et al, Lafrone Clark farm, Independence	5	1059
H. W. Patterson, Black farm, Scio	6	896
Hill, Hughes & Keller, Fee farm, Genesee	5	1425
I. & H. Oil Co., Peterson farm, Wirt	4	1546
Allegany Water-Intake Wells—		
A. D. Gray et al, Smith-Gray farm, Genesee	...	1412
Messer Oil Corp., Courtney Hollow farm, Genesee	...	1352
Ebenezer Oil Co., Herrick farm, Alma	...	1352
R. B. Moore No. 6, Daniels farm, Bolivar	...	1388
Dick Oil Co., Cameron farm, Bolivar	...	1433
Bradley Prod. Corp., Monder farm, Alma	...	1278
V. V. V. Franchot, Reddy farm, Alma	...	1415
H. W. Patterson, Fuller-Ockerman farms, Amity	...	762
Ohio		
Allen County—		
Lapsher & Wagner, Lenny 10	1	1364
Ashland County—		
Stewart et al, Mosher et al 1	•	775
Athens County—		
H. C. Williams, Young 1	1	1070
Ohio Fuel Gas Co., Ross 1	¶.24	1033
Sunday Creek Coal Co. 187	¶.10	280
Sunday Creek Coal Co. 188	¶.13	269
D. T. Orndoff, Howard 2	¶.07	1427
Gibson, Joyce 1	¶.06	1667
Wallace et al, Morris 1	¶	1420
Fairfield County—		
Gas Prod. Co. of O., Miller 1	•	2045
Gallia County—		
C. A. Cody, Rothgeb 1	¶.19	1744
Guernsey County—		
Ronshausen et al, Huff 1	1	1115
Jewell Gas Co., Miller 1	¶.13	1186
Hocking County—		
Preston Oil Co., Sunday Creek Coal Co. 177	30	3436
Sunday Creek Coal Co. 180	•	3606
Sunday Creek Coal Co. 1719	•	3607
Holmes County—		
Ohio Fuel G. Co., Perdue 1	¶1.48	3270
Jackson County—		
F. O. Hurt et al, McKell Est. 1	¶.14	2940
Jefferson County—		
C. S. Kelly et al, Barnhouse Hrs. 3.	•	1310
Knox County—		
Ohio Fuel Gas, Billman 1	•	3009
Licking County—		
Gail Earley et al, Lothes 6	5	748
J. C. Bebout, Flurshultz 2	¶.88	2668
Ohio Fuel Gas, Hansberger 13	¶.26	2599
C. R. Settles, Mears 1	¶.20	1263
Kundtz-Hulse et al, Booth 3	•	3940
Lorain County—		
Forest, Wise 8	4	153
Wise 7	1	164
Medina County—		
Fred C. Shaner, Matthews 2	8	501
DeFusto & Sawyer, Allis 22-D	2	409
Allis 19-E	I	419
Allis 21-C	I	390
Allis 23-C	I	391
Allis 21-E	I	400
Wm. Dempsey, Hutchinson 1	¶.18	3414
Wood, Woodward 1	•	580
Woodward 2	•	526
Kemrow, Still 1	•	2586
Preston Oil Co., Packard 1	•	503
Packard 2	•	500
Marine Trust Co., Ross 08	I	395
Ross 09	I	404
Ross 013	I	400
Ross 014	I	384
R. C. Holmes et al, Ripley 11	2	504
Hostettler 03	1	479
Rumbaugh 04	1	494
Rumbaugh 05	1	505
Rumbaugh 2-W	I	509
Meigs County—		
Wilbur D. Roush et al, Fee 1	¶1.00	2370
Simpson et al, Beegle 1	•	510
Monroe County—		
F. C. Paulus et al, Strauch Hrs. 1.	10	1617
Craig Bros., Griffon 1	5	826
H. B. Walker, Piatt 1	¶.15	2152
H. E. Fleeman et al, Beardmore 3.	¶.10	1340
Morgan County—		
Patten & White, Fisher 3	8	1580
Helen J. Burt et al, Yarnell 12	1	530
Shabbott, Teeters 1	¶.93	962
W. S. Williams, Bowman 1	¶.25	1004
Noble County—		
Metcalf et al, Springer 1	1	1025
S. L. Skinner, Hughes 2	1	827
R. M. Burns et al, Rich 1	•	1533
Perry County—		
Davis & Hazelett, Kehota Coal Co. 1	72	3370
Preston Oil Co., Sunday Creek Coal Co. 1706	25	3442
Randolph 4	11	3231
Crude Oil Co., Williamson 1	10	3275
Gas Prod. Co. of O., Williams 5	¶.80	3272
Koehler 4	¶.30	3270
Tuscarawas County—		
Brendel Prod. Co., Columbia Fire Clay 4	¶.50	4524
Status Dev., Wandle Co.	¶.30	4684
E. Ohio G. Co., Reeves Mfg. Co. 2.	•	5263
Washington County—		
Emmett W. Haas et al, Kuntz 2	4	951
Baker & Dailey, Howiler 1	2	1463
Depuy Bros., Hendershot 5	1	1385
Bren et al, Barnett 1	•	2108
Wyandot County—		
T. R. Phillips, Bowman 1	1	1421
Ashland County—		
Ohio Fuel Gas, Lisle 1	•	2996
Athens County—		
Ohio Fuel Gas, Barnhill 2	¶1.85	1040
Coshocton County—		
Preston Oil Co., Van Winkle 6	62	3118

"I" indicates input well.

[*Continued on next page*]

PATTERSON-BALLAGH PROTECTORS keep pipe new

You'll get thousands of feet of extra drilling out of your drill pipe with Patterson-Ballagh Protectors. This is the kind of protection that keeps your pipe new. Less fatigue, less vibration, less friction, less abrasion. One trial proves their worth. Ask for Catalog.

PATTERSON-BALLAGH CORPORATION

New York City

Los Angeles Houston

More Pipe Cuts with this RIDGID Thin-Blade Cutter-Wheel

YOU'LL be surprised at the quick easy way this new type cutter wheel rolls through pipe. Its forged blade, assembled in a solid hub, extra-thin and tough, actually cuts more pipe per wheel, saving you money. And cuts true in the powerful smooth-working Standard RIDGID Cutter. Made also in heavy-duty pattern, both cutters and wheels. Save time, work and money with these remarkable cutters. Buy them at your Supply House.

Standard RIDGID *No. 1 and 2 Pipe Cutter*

THE RIDGE TOOL COMPANY · ELYRIA, OHIO

RIDGID PIPE TOOLS

United States Well Completions—*Continued*

OHIO—Continued

Company, Well and Location	Init. Prod. Bbls.	Depth
Holmes County—		
Ohio Fuel Gas, Heffelinger 1	¶0.10	3002
Lydia, Kohman 1	¶	721
Lawrence County—		
Ohio Fuel Gas, Rich 1	¶0.10	2692
Licking County—		
Eagan & Murphy, Corkwell & Metz 1	¶2.60	2340
Wehrle Co., Lawrence 1	¶0.60	2528
Shrider, McKinney 3	2	572
Lorain County—		
Forest Wise 4	25	168
Wise 5	10	171
Medina County—		
E. R. Edson & Son, Brant 14	20	478
Brant 15	10	519
Brant 16	20	481
Brant 17	*	487
Brant 18	*	500
Auble 8	6	337
Auble 9	2	370
Auble 10	*	341
Auble 11	*	339
Meigs County—		
B. H. Tree et al, Swearinger 1	¶0.35	3500
Tyree, Wolf 2	¶0.05	3313
Bowman, Brown 2	¶	712
Morgan County—		
Crowley, Bowman 1	1	515
Muskingum County—		
Wilking Co., Wilking 1	¶1.54	3329
Atha Oil Co., Persin 1	¶1.10	4392
Palmer & Guisinger, Burton 2	*	4375
Noble County—		
Metcalf & Robinson, Springer 4	1	1090
Perry County—		
C. Z. Ruth, Powell 16	6	1171
Denman 7	4	1170
Stark County—		
C. W. White, Thomas 1	¶1.10	4588
Washington County—		
Wickin & Aikens, Wickens 1	*	1267

Oklahoma

Company, Well and Location	Init. Prod. Bbls.	Depth
Caddo County—		
Continental Dr. Co., Wagner 2, sw ne nw sw 12-5n-9w	401	3205
Stephens, Brown 1, sw se nw 28-6n-10w	*	5951
Carter County—		
Barrett, Hall 1, nw se nw se 20-3s-2w	*	305
Gibson & Jennings, Hoover 1, nw nw sw se 20-4s-2w	150	2051
Boring et al, Lamb 1, cwl nw ne ne 29-4s-2w	29	2294
Coal County—		
Andy Oil Co., Whitney 1, ne swc ne 26-1n-8e	*	800
Comanche County—		
Wichita, Palmer 15, sw sw ne nw 28-2n-10w (otd 1031)	12	450
King, Culbertson 2, ne nw ne ne 32-2n-10w (otd 515)	*	710
Creek County—		
Viersen, Replogle 1, nw sw ne 24-14n-10e	180	2634
Wright, Meyer 28, swc nw 24-17n-10e	40	1909
Sinclair Prairie, Kieffer 31, se se nw se 17-17n-12e	14	1537
Kay County—		
Alma Oil Co. et al, Livergood 1, nec nw 29-28n-2e	*	4181
Kiowa County—		
Burke, Morgansen 1, nwc sw 6-2n-16w	*	1035
Lincoln County—		
Portable, Bain 1, se sw nw 24-17n-2e	*	4667
Muskogee County—		
Penmar Oil Co., Jackson 6, se sec nw 17-13n-16e	102	2100
Parks, McDaniel 5, se se ne se 17-14n-19e	*	690
Noble County—		
Phillips, Harbison 5, ne sw sw 22-23n-2w	3509	4341
Okfuskee County—		
Reese Dr. Co., Berryman 1, nw sw sw 36-11n-8e	552	3476
Droppleman, Dill "B" 1, swc 35-12n-8e	200	3580
Oklahoma County—		
Sunray, Harn 2, ne sec nw 27-12n-3w (otd 6458)	955	6549
State 7, sw nw ne ne 27-12n-3w (otd 6492)	230	6529
Continental, Remund 1, sec ne 24-14n-4w	*	6785
Okmulgee—		
Sampson Oil Co., Hawkins 1-A, se sw sw 28-14n-14e	5	1222
Hazlett, Ashley 10, csw nw 29-14n-14e	10	1269
Osage County—		
Norris et al, 5, cs½ ne se 15-21n-12e	10	1307
Norbla et al, 1, nec nw 25-22n-9e	105	2449
Carter, Unit 5, ne nw nw 10-25n-6e (otd 2675)	40	2748
Pontotoc County—		
Garrett, Williams 1, nec 28-2n-4e	*	570
Starr O&G Co. et al, State-Bayless 1, sec nw 32-5n-4e	*	2535
Superior, Northam 1, nwc ne 36-5n-4e (otd 2636)	275	2689
Pottawatomie County—		
Atlantic, McCurry 3, sw ne nw 6-6n-4e (pb 4260)	200	4450
Magnolia, Lynn 1, nec 21-7n-4e (otd 4004)	7	4102
Sinclair Prairie, Blandin 10, ne se sw 24-7n-4e (otd 4355)	16	4392
Atlantic, Washington 1, se ne ne 24-11n-4e	137	4859
Dunnett, Rogers 4, nw se sw 31-11n-4e	306	4503
Seminole County—		
Sinclair Prairie, Gibson 9, se ne se nw 14-7n-6e	140	3189
Newsome, Oakes 1, sw ne sw 16-7n-6e	42	4447
Shepherd, Scroggins 5, nw sw sw 34-7n-6e	48	2884
Davis et al, Thlocco 1-A, nw sw nw 30-7n-7e	90	2263
Morgan et al, Hayes 1, nw ne se 8-8n-6e	*	3605
Gulf, Maley 1, nwc 20-9n-6e (otd 4256)	3	4296
Tulsa County—		
Cummings Oil Co., Rider 4, ce½ nw 27-17n-13e	20	2017
Sinclair Prairie, Todd 14, cse sw 32-21n-13e (pb 1145)	1	1522
Wagoner County—		
Pearson et al, Weldon 1, swc ne 5-18n-18e (otd 738)	*	925

Pennsylvania

BRADFORD DISTRICT

Company, Well and Location	Init. Prod. Bbls.	Depth
Penn Valley Crude Oil Corp., Fee	1	....
Quinlan Oil Co., Fee	5	....
Smith Estate, Fee	1	....
Bradford Tr., 26 wells	26	....
Walker Bros. et al, Bing 272	2	....
Stuchel & Freeman, Freeman	2	....
Forest Oil Corp.	1	....
Forest Pet. Corp., 2 wells	2	....
Niagara Oil Corp., 5 wells	5	....
Ernest Meridan et al, Givan & Slike	2	....
B. McCaffery et al, McCaffery	1	....
C. M. Lippert et al, Lippert	15	....
Bradford Water-Intake Wells—		
Messer Oil Corp., Loop	...	....
Merry Bros., Bingen Est.	...	....
Pine Run Oil Co., Bing 130-1-2-3-4-6, 3 wells	...	....
Forest Oil Corp., 2 wells	...	....
Forest Pet. Corp., 2 wells	...	....
Niagara Oil Corp., 6 wells	...	....

MIDDLE DISTRICT

Company, Well and Location	Init. Prod. Bbls.	Depth
John H. Glass, F. W. Mitchell	½	....
Glass & Highfield, Highfield	1	....
Exchange Bank & Trust Co. of Franklin, Whieldon	4	....
W. H. Fertig, Fertig	1	....
A. L. Shaner, Parker	1	....
Riley Allen Est. No. 1, Allen	1	....
Andrews Bros. Oil Co., Minnum	1	....
Albert Oil Co., Easton	1	....
Wm. McEwen et al, Roeske	1	....
John H. Glass, Mitchell	½	....
A. E. & G. W. Kahle, Kahle	2	....
W. T. & F. T. Barry et al, Given & Barry	6	....
Alice G. Harvey, Grandin	1	....
Messer Oil Corp., Shaner	1	....
Richardson Pet. Corp., Towner	1	....
Bradley Prod. Corp., Monder	1	....
The Otsquago Oil Co., Pike	1	....
Marsh Oil Co., Withey	1	....
H. W. Patterson, Fuller Est.	1	....
H. W. Patterson, Coyle & Whitney	1	....

BUTLER ARMSTRONG DISTRICT

Company, Well and Location	Init. Prod. Bbls.	Depth
Pfeiffer & Ethridge, Zinkhorn	3	....
Heck, Larkin et al, Mahan	gas	....
Edward McKinney, McKinney	2	....
Willis M. Ruby, McCollough	1	....
Smith Bros., Scheibel	5	....
M. E. Anderson, Peebles	1	....

NEW YORK-PENN GAS FIELD

Company, Well and Location	Init. Prod. Bbls.	Depth
Belmont Quadrangle Dr. Co., Gregg	*	....
Penn York Gas Corp., Lorello	*	....
C. E. Updegraff, Clark	*	....

SOUTHWEST PENNSYLVANIA

Company, Well and Location	Init. Prod. Bbls.	Depth
Fayette County—		
Wahler Powers O. & G. Co., Shamrock Farms Co. 2	¶0.03	2442
Indiana County—		
T. W. Phillips G. & O. Co., Fleming 1	¶0.12	1285
Campbell 1	¶0.06	3416
Boyer 2	*	3473
Washington County—		
Equitable Gas Co., Wright 1	¶0.16	3012
Foster 1	*	3242

South Texas

CORPUS CHRISTI DISTRICT

Company, Well and Location	Init. Prod. Bbls.	Depth
Brooks County—		
Humble, McGill Bros. 68 (Kelsey)	225	4735
Hidalgo County—		
Phillips Petr., Febronio Flores 1 (Samfordyce)	300	4184
Jackson County—		
Humble, L. Ranch Co. 2-B (Lolita)	1200	5939
Magnolia, Ward et al 2 (Lolita)	250	5929
West 96-A (West Ranch)	1250	5769
Wellington Oil Co., L. Ranch Co. 4 (Lolita)	400	5941
Jim Wells County—		
Rodney Delange, McNeill 20 (Wade City)	500	4934
Henshaw Bros., Schrade 1 (Wade City)	500	4939
H. H. Howell et al, Lagging 1 (Orange Grove)	650	5125
Schrade 3 (Orange Grove)	600	5661
O. W. Killam, Wade 10 (WC), blk 10, lot 6	*	5505
Lewis Prod. Co., Adams 4 (Alfred)	250	4680
Magnolia, Schmidt 3 (Wade City)	500	4928
T. H. McElvaine, Blashke 1 (Wade City)	250	5095
M. M. Miller & Sons, Gallagher 3 (Gallagher)	*	6260
H. R. Smith, Inc., Thiel 1 (WC), blk 25, ab 394	20	5945
Live Oak County—		
Continental Oil, Cartwright 1 (WC), Mount Lucas area	*	7835
Coquat, Holland & Smith, Bonham 2-A (White Creek)	125	1319
Nueces County—		
Conroe Dr. Co., Sellers 1 (Stratton)	200	6915
Gulf Plains Corp., Elliff 4 (Stratton)	¶10.0 & 100	4988
Humble, Duncan 1, (East Flour Bluff)	58	7075
Flour Bluff-State 1-E (East Flour Bluff)	250	6811
Refugio County—		
Hewitt & Dougherty, Posart 3 (La-Rosa)	*	5750
Quintana Petr. Corp., Heard 38 (Tomoconnor)	1250	5925
San Patricio County—		
H. H. Coffield et al, Groos et al 1 (WC), 791-ac tr, ab 363	*	4880
Norsworthy Prod. Co., McKamey 1 (WC), blk E, sur 11	*	6503
Victoria County—		
Barnsdall, Keeran Ranch 8 (Keeran)	¶10.0	7500
Bay O. & G. Co., Zimmer 3 (Coletto Creek)	100	2842
Nutex Oil Co., Zimmer 2 (Coletto Creek)	200	2815
Plummer Oil Co., Terrell 4 (Coletto Creek)	¶20.0	7680

LAREDO DISTRICT

Company, Well and Location	Init. Prod. Bbls.	Depth
Duval County—		
Forest Dev. Corp., Rogers 2 (Bridwell)	*	4554
Magnolia, D. C. R. C. 6 (58) (Lundell)	42	1556
D. C. R. C. 9 (132) (Cedro Hill)	55	1458
Well 21 (113-495) (Hoffman)	*	2795
M. S. Massingill and P. L. Keller, Peters 1 (WC), sur 162	*	2840
Wm. M. Nicholls & J. C. Hawkins, Garcia 1 (Chiltipin)	15	4980
Prescott Williams, Taylor 1 (WC), blk 84, 3664-ac tr	*	3567
Jim Hogg County—		
C. Andrade III, Martincz (Trevino) E-1 (Colorado)	200	2978
Humble, Atwood 16 (Colorado)	125	3082
Mestina O. & G. Co. 4 (WC), 3482.5-ac tr, 7 mi e Hebbronville	*	6025
Sun Oil, Thaxton 6 (Colorado)	125	2991
Starr County—		
Complete Oil Well Ser, Yzaguirre 1 (WC), sec 227	125	5258
R. C. Hillman, Gonzales Hrs. 1 (WC), por 69, sh 232	*	3937
Webb County—		
Glenda Oil Co., Saldivar 2-A (WC), sur 656	*	1042
Wm. F. Houser & Campbell, Bruni Est. 2 (Glen)	250	1163
Humble, Yaeger et al 9 (Adami)	20	1003
Yaeger et al 11 (Adami)	20	1006
Yaeger et al 12 (Adami)	20	1009
Hiram E. Hall, Slator 1 (WC), blk 89, Borrego gr	*	1460
O. W. Killam, Bruni Est. 1 (WC), lot 4, 8 mi s Bruni	*	2863
Transwestern Oil Corp., Bruni Est. 1-B (Glen)	30	2165
Bruni Est. 2-B (Glen)	¶10.0	2162
Zapata County—		
Dulup Oil Co., Garza Est. 1 (WC), blk 53, Los Comitas gr	*	1941

SAN ANTONIO DISTRICT

Company, Well and Location	Init. Prod. Bbls.	Depth
Caldwell County—		
Welgand Bros., Hill 1 (WC), 137-ac tr, John D. Rains sur	216	2703
Medina County—		
Burt C. Calvin, Chandler 1 (WC), 802.3-ac tr, sur 12	*	1062

United States Well Completions—*Continued*

East Texas

Company, Well and Location	Init. Prod. Bbls.	Depth
Harrison County (Waskom)—		
Arkansas-Louisiana Gas Co., Abney D-1, S. Holloway sur.	¶20.0	6215
Union Prod. Co., Karslake 1, T. D. Wilson sur.	¶10.0	6097
Joiner Area—		
Stanolind, Milstead 20 (84.22-ac)	750	3731
Texas Canadian Oil Corp., Camp 4 (7½-ac)	500	3600
Kilgore Area—		
Harcher Oil Co., Laird-Moses 4, blk 121	800	3577
Laird-Moses 6, blk 121	1000	3577
Shell Oil Co., Elder 44-a (196-ac)	2400	3645
Longview Area—		
Cushing Dr.-Long Dr. Co., Owens 19-A (208-ac)	720	3650
Anderson County (Cayuga)—		
Amerada, Berk 11 (1057-ac)	200	4026
Carter-Gragg Oil Co., Goode-Tidal 7	199	4007
Morris County (Wildcat)—		
C. B. Zuber et al, Connor 1	*	4562
Rusk County (Wildcat)—		
J. S. Harrold et al, Armstrong 1	*	7506

West Texas

Company, Well and Location	Init. Prod. Bbls.	Depth
Andrews County (West Andrews)—		
Atlantic Ref. Co., University 1, Tr. 11-2	149	4500
Andrews County (Emma)—		
Harry Adams-C. A. Bradley, University 3	1204	4325
Crane County (Jordan)—		
E. E. Fogelson et al, University 3-C	246	3655
University 4-C	132	3656
Snowden & McSweeney Co., University 7-a	2229	3534
Ector County (Foster)—		
M. J. Delaney et al, Johnson 2-B	1651	4150
Great Western Producers, Inc., Johnson 4	1085	4125
Sinclair Prairie, Johnson 5-C	503	4185
Sun Oil, Witcher 2	1122	4055
Ector County (Goldsmith)—		
Gulf, Goldsmith 305	649	4219
Ector County (Jordan)—		
Gulf, University 3-N	4904	3600
Gaines County (Wasson)—		
Continental, Moore 6-45	662	5050
Gaines County (Seminole)—		
Amerada Pet. Corp., Tippett 1	587	5290
Atlantic Ref. Co., Riley 4-C-a	620	5321
Magnolia-Atlantic, H. & J. 11-265	605	5265
H. & J. 4-221	370	5245
Shell Oil, Mann 2	920	5232
Hockley County (Slaughter)—		
Sid Richardson et al, Slaughter 1-B	891	4995
Ward County—		
Acme Oil & Roy. Co., Sloan-Shell 2	87	3023
Gulf, O'Brien 140	159	2765
Winkler County (Keystone)—		
Sam Weiner et al, Jenkins-Conoco 4	185	3405
Yoakum County (Wasson)—		
Anderson-Prichard, Willard 5-761	1135	5197
Don Danvers et al, Comer-Shell 2. Willard 2, sec 739	862 270	5205 5200
Honolulu Oil Corp., Wilder 14-804	920	5135
Humble, Armstrong 2	977	5115
Oil Dev. Co., Willard 1-38	1513	5080
Shell Oil, Corder 1-36	817	5045

Texas Panhandle

Company, Well and Location	Init. Prod. Bbls.	Depth
Carson County—		
Magnolia, Fee (Tr. 244) 86	50	3080
Texas Co., Cooper 14	415	3181
Gray County—		
Sinclair Prairie, Coombs-Worley 2-B	53	3282
Hutchinson County—		
Barnsdall Oil Co., Harrington 3	¶7.9	3175
Lewis 12	85	3166
Clay Bros. Dr. Co., E. Smith 1	30	3227
J. E. Crosbie, Inc., Cockrell-Gulf 1	200	2965
Kewanee Oil Co., Lewis 44	145	3023
Texas Co., Lewis 30	390	2980
Lewis 31	378	2970
Lewis 36	400	3025
Moore 9	264	3160
Quinn 13	462	3120

North Texas

Company, Well and Location	Init. Prod. Bbls.	Depth
Archer County (Hull-Silk)—		
Pet. Producers Co., Carson 2	1728	4385
Phillips Pet., Little-Norvell 3	864	4424
Archer County—		
L. T. Burns et al, Blewitt-First Nat'l Bank 5	9	1476
Bert Ligon et al, White 7-E	9	470
Panhandle Ref. Co., Green 49-B	5	1122
Baylor County (Wildcat)—		
H. D. Egger et al, Portwood 1	*	1462
Clay County—		
J. B. Cunningham et al, Big Wichita River 2	*	1147
J. E. Kendall et al, Boddy 6	5	1340
Sussex Oil Corp., Glasgow 9	10	1092
Glasgow 10	10	1100
Clay County (Wildcats)—		
Akin-Dimock-Costley, Edrington 1-C	*	1247
Mundt & Keenan, Hansard 1	*	409
Jack County (Wildcat)—		
Continental, Robertson 1	*	3200
Cooke County (Walnut Bend)—		
Sinclair Prairie, McGeorge 14	560	4990
Montague County (Nocona)—		
Anderson-Prichard-Foree, Beck 1 (pb to 4652 ft)	98	5437
Montague County (Bonita)—		
Sinclair Prairie, Doty 2 (69-ac)	*	6975
Wichita County (K-M-A)—		
Bishop Oil Co., Waggoner Bros. 4-A	600	3797
Hanlon & Buchanan, Fassett-Tuttle 14-G	352	4082
Fassett-Tuttle 18-G	552	4078
Shell & Phillips Pet., Griffin 9	41	3986
Wichita County—		
C. O. Davis et al, Jones 7	10	615
Fisher & Dudley, Warren 11	*	1642
T. F. Hunter et al, Waggoner Bros. 47-A	10	1558
Mogren & Anderson, Mertens 14	5	949
Wichita County (Wildcat)—		
C. A. Reid et al, Jenne 1	*	605
Wilbarger County—		
R. T. Lutz et al, Streit 1	51	1472
Paradise Oil Co., Waggoner Est 7-B	112	545
Young County—		
Chas. B. King et al, Dalley 6	6	567
K. R. March et al, Burton 1	19	4255
Ray Oil Co.-J. P. Nash, J. Horn 1 (pb to 2903 ft)	38	4525
King-Wootten 2	¶80.0 & 19	4076
King-Wootten 3	20	2960
Tex-Tor Oil Corp.-McLester, Knight 3-C	1305	3773

Texas Gulf Coast

Company, Well and Location	Init. Prod. Bbls.	Depth
Anahuac—		
Magnolia, Porter 1	*	7120
Bammel—		
Harrell, McLaughlin 1	46	6255
Clam Lake—		
Shell, McFaddin 11	218	5941
Dickinson—		
Humble, Fream 9	34	8279
Mid-States, Weems 1	¶70.0	8347
Fannett—		
Gulf, Bordages 6	832	8220
Bordages 9-A	¶	8090
Hamman—		
Hamman, Richers 3	60	9649
Hillje—		
Texas, Haggard 1	62	5217
Ogburn—		
Richardson & C. C. Dr. Co., Sweeney 1	*	7012
Seabreeze—		
Sun, Hoffman 3	114	8470
South China—		
Titantic, Broussard 3	236	7936
West Columbia—		
Hogg, Hogg et al 12	480	6714
West Port Neches—		
Titantic, Akers 1	*	5600
Phillips, Stark 2	449	4554
Withers—		
Texas, Broussard 20	424	5544
Pierce C-75	95	5390
Chambers County—		
Humble, State 1-A-247, Red Fish Reef	25	8815
Harris County—		
J. N. Rayzor, Robertson 1, Red Bluff prospect	*	8012

West Virginia

Company, Well and Location	Init. Prod. Bbls.	Depth
Boone County—		
Owens-Libby-Owens, Allen & Pryor 25	¶.12	2378
Calhoun County—		
Elliott & Cain, Mills 1	*	1857
Lincoln County—		
Brooks Gas Co., Morris 1	¶3.18	1600
United Fuel Gas Co., Guyan Land Asso. 2260	¶0.17	2365
Hope Nat. G. Co., Linville 2460	¶0.08	3887
Pleasants County—		
B. C. Deem, Jr., Carder 5	40	1870
Putnam County—		
W. C. Kingery et al, Mitchell 1	¶0.20	2040
Ritchie County—		
A. Jackson, Campbell 1	¶0.30	1478
Pittsburgh O. & G. Co., Coyle 1	¶0.15	2035
Wirt County—		
S. W. Douglas, Tucker 4	2	1322
Wood County—		
Leeton & Flanagan, Baker 1	4	1750

Wyoming

Company, Well and Location	Init. Prod. Bbls.	Depth
Albany County (Rex Lake)—		
Ohio Oil Coughlin 1, sw ne nw 26-16n-77w	43	4436
Carbon County (Albert Dome)—		
Albert Dev. Synd., Boeke 1, sw nw 18-25n-79w	*	1600
Carbon County (Wertz)—		
Sinclair-Wyoming Oil, Unit 14, nw sw ne 7-26n-89w	4824	6043
Natrona County (Iron Creek)—		
Iron Creek Oil, Government 1, sw nw 11-32n-82w	*	721
Fremont County (Government Draw)—		
Logue Trust, Wisner 1, ne sw 8-33n-98w	*	950

*Failures; †Junked; ¶Million cu. ft. gas.

Revise East White Point Rules

The Texas Railroad Commission has revised its rules for the East White Point field to allow wells to be drilled on a 10-acre proration unit. Wells may be located 330 feet from lease lines and 660 feet apart, instead of 466 feet from lease lines and 933 feet apart as under the old order.

From $3 Single or Double
HOLLYWOOD Plaza Hotel
VINE AT HOLLYWOOD BLVD.
NEAREST HOTEL TO RADIO AND MOVIE STUDIOS
TWO GUESTS ONE PRICE

WILDCAT REPORT
New Starts and Completions

ALABAMA

FIRST REPORT

Colbert County—F. F. Mellen & Gear's Alsobrook 1, sw nw 10-4s-15w, spd.

ARKANSAS

FIRST REPORT

Columbia County—Standard Oil Co. of La.'s Longino & Goode 1, nw se 10-18-20, mat.

COMPLETIONS

Clark County—J. H. Coker & J. P. Grieves' McClelland 1, nw nw se 11-10-21, abnd 1603 ft. William S. King's Ross 1, nec s½ sw 3-10-21, junked 2607 ft.

CALIFORNIA

FIRST REPORT

Ventura County—Hopland Oil Co.'s No. 1, sec 1-3-19, grading roads, Bardsdale area.

COMPLETION

Kern County—Trico O. & G. Co.'s Coffee 1, sec 8-28-29, td 1578 ft, gray sand, Vedder 1560 ft, oil showing in Jewitt at 1380 ft, abnd, Round Mountain area.

KANSAS

FIRST REPORTS

Barber County—Barbara O. & G. Co.'s Angell "A" 1, cne ne 10-33-14w, plts.

Butler County—Davidson et al's Wilhite 1, nec sw 16-27-7e, dr.

Russell County—Anderson et al's Radke 1, cs½ se sw 18-15-14w, lcn.

COMPLETIONS

Dickinson County—Midland Oil Co. et al's Haines 1, se sw sw 23-16-4e, 3 mi n Lost Springs pool, Mississippi 2329 ft, 13 bbls oil & 12 bbls water, abnd 2411½ ft.

Douglas County—T. Goff et al's Nies 1, cne sw 3-13-21e, 10 mi e Lawrence, td 700 ft, 250,000 ft gas.

Ellsworth County—Billings et al's Vanek 1, swc se 25-14-10w, 10 mi n Stoltenberg pool, Arbuckle 3121 ft, hfw, abnd 3129 ft.

Pratt County—Herndon Dr. Co. et al's Montgomery 1, cel sw 13-27-13w, Arbuckle 4441 ft, perf 4323-35 ft and 4335-46 ft, 2000 gals acid, hfw, abnd 4458 ft.

SOUTH LOUISIANA

COMPLETIONS

Calcasieu Parish—M. H. Hannah's Reed 1, Vinton area, sec 18-10s-12w, abnd 3133 ft.

East Baton Rouge Parish—Golding & Farris' Paulet 1, McInnis prospect, sec 57-7s-1e, abnd 7512 ft.

Jefferson Davis Parish—Magnolia's Waite 9, sec 12-9s-7w, new sand for Iowa fld, flowed 1560 bbls 36.4-gr through ⅛-in choke from Oligocene at 8236 ft.

Cameron Parish—Stanolind's School Board 22, owdd, new sand West Hackberry fld, flowed 440 bbls daily through 5/32-in choke from 9816-26 ft.

NORTH LOUISIANA

FIRST REPORT

Claiborne Parish—A. D. Veary's Harris 1, sw 17-19n-6w, mat for Travis Peak test.

MICHIGAN

FIRST REPORTS

Allegan County—Smith Pet. Co.'s Stone 1, ne ne sw 3-4n-12w, dr.

Cass County—R. B. Tamblyn Dev. Co.'s Woolverton 1, se ne ne 22-8s-15w, rig.

Kent County—Swanson Con. Oil Co.'s Troost 1, ne se nw 33-6n-11w, rig. H. C. Williams' Gross 1, se sw se 30-7n-9w, rig.

Montcalm County—Smith Pet. Co.'s Chapin 1, nw nw 14-11n-7w, dr.

Ottawa County—C. E. Bliss' Merkins 1, sw nw nw 21-8n-15w, dr.

Van Buren County—Smith Pet. Co.'s Mele 1, nw nw nw 27-1s-16w, dr.

COMPLETIONS

Allegan County—E. O. Lucas' Wood 1, se sw ne 4-2n-13w, Traverse lime 1490 ft, abnd 1553 ft. Merrill & Dean's Raymond 1, nw ne nw 26-2n-16w, Traverse lime 1195 ft, so 1197 ft, abnd 1202 ft. Weller & Dapar's Lankheet 1, nw se ne 1-4n-14w, Traverse 1605 ft, abnd 1633 ft. Wolverine Nat. Gas Co.'s McLaughlin 1, ne sw ne 9-2n-12w, Traverse 1822 ft, abnd 1830 ft.

Cass County—Schurtz & Prathers' Pullin 1, sw sw nw 14-5s-14w, Traverse 1065 ft, abnd 1150 ft.

Genesee County—Lewis Burr's Hermann 1, sw sw nw 13-6n-5e, abnd 2493 ft.

Isabella County—Cryden Pet. Corp.'s Miller 1, ne sw sw 20-15n-6w, Monroe 3745 ft, abnd 3780 ft. Twin Dr. Co.'s Methner 1, nw sw ne 33-16n-3w, Dundee lime 3650 ft, so 3702 ft, abnd 3768 ft.

Kalamazoo County—Max L. Morton's Kline 1, sw se ne 29-4s-12w, Traverse 1168 ft, abnd 1183 ft.

Kent County—E. R. Roach's Hunsburger 1, se se sw 28-8n-11w, Traverse 2144 ft, abnd 2207 ft.

Missaukee County—Century O&G Co.'s Anderson 1, se se sw 14-22n-8w, Monroe 3881 ft, abnd 4054 ft. D. E. Hughes' Herringa 1, se se 21-21n-8w, Monroe 3996 ft. abnd 4015 ft.

Osceola County—C. L. Maguire, Inc.'s Armstrong 1, cs sw nw 23-18n-7w, Dundee 3947 ft, abnd 4031 ft.

Ottawa County—Bell-Marks, Inc.'s Grasymer 1, se se nw 25-6n-14w, Traverse 1705 ft, abnd 1767 ft.

MISSISSIPPI

FIRST REPORT

Marshall County—Joe Blosser's Stansback 1, se se 19-3s-4w, lcn.

COMPLETIONS

Monroe County—Willmut G&O Co.'s Rye 1, ne 22-15s-17w, abnd 2746 ft in hard black slate.

Perry County—Fohs Oil Co.'s Bond Lbr. Co. 1, sec 17-1s-11w, elev 229 ft, chalk 5951 ft, electric log to 7593 ft, abnd 7600 ft.

MISSOURI

FIRST REPORTS

Caldwell County—O. M. Evans et al's Lamar 1, csw ne 31-55n-28w, ru.

Carroll County—Williams et al's Hiatt 1, sec 7-52n-22w, sd 300 ft.

COMPLETIONS

Adair County—Ettington et al's Clark 1, nec se 8-63n-14w, Arbuckle 1220 ft, abnd 1247 ft.

Randolph County—Gallamore et al's Buckler 1, c sw nw 22-52n-14w, Arbuckle 700 ft, abnd 1185 ft.

NEBRASKA

FIRST REPORT

Keith County—Keys et al's Haythorne 1, csw 27-16-39w, ru.

COMPLETION

Richardson County—Shaffer et al's Boose 2, cse nw 16-1n-16e, ne Falls City pool, Mississippi 1976 ft. Kinderhook 2150 ft, Hunton 2359 ft, abnd 2393 ft.

NEW MEXICO

FIRST REPORTS

Dona Anna County—B. C. Armstrong et al's Baker 1, ce½ nw sw 4-23s-1e, lcn.

Eddy County—Clark & La Neve's Boulter 1, ne se nw 28-19s-27e, lcn.

COMPLETIONS

Eddy County—Sanders Bros. et al's DeTemple 1, cnw nw 27-19s-31e, elev 3493 ft, salt 775-2020 ft, Yates 2195 ft, abnd 2763 ft.

Luna County—O. D. Derry et al's Berry 2, sec sw 33-22s-10w, abnd 1187 ft.

OKLAHOMA

FIRST REPORTS

Hughes County—Feagin et al's Nix 1, sw ne sw 8-9n-11e, mch. Loual Dr. Co. et al's Stevenson 1, ne nw se 24-8n-10e, mirt.

Lincoln County—Mason et al's Crane 1, sw ne se 7-12n-5e, dr.

Okfuskee County—W. O. Carter's Bucco 1, nec se 20-10n-12e, rust. Pine et al's Armstrong 1, sec ne 3-11n-10e, mirt.

Osage County—Peters & Norbia et al's Osage 1, se nw sw 16-22n-9e, dr.

Tillman County—Price et al's Crow 1, nwc ne 24-2s-15w, dr.

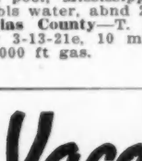
COMPLETIONS

Atoka County—Thomson Bros.' Richardson 1, ne se sw 10-3s-9e, nw Boggy Depot, Wilcox 2365-75 ft, hfw 2294-97, 2365-2401 ft, abnd 2401 ft.

Cotton County—Mohican Dr. Co.'s Boydstein 1, nwc ne 9-5s-9w, 10 mi w Waurika, Arbuckle 2363 ft, abnd 2466 ft.

Hughes County—Loual Dr. Co. et al's Jackson 1, csw nw 24-9n-9e, ne Fuhrman area, Booch 2435 ft, td 3303 ft in Cromwell, pb 2575 ft, 4,000,000 ft gas.

Vacation in Ft. Worth



SWIM . . . yes, to your physical delight, in the cooling waters of 15 mile Lake Worth. Speed boating, sail boating and fishing, too. Amusements at the Casino.

DANCE . . . to the brass and strings of world famous bands at the cool pleasure spots in Metropolitan Fort Worth. Here's exciting fun for every one.

GOLF . . . on the greens of rolling courses. Be it par or below you'll find new adventure at every tee. Guest cards to guests of the Worth.

PICNIC . . . in the parks, on the shores of Lake Worth . . . at Inspiration Point. Our catering department will prepare the choicest of baskets for you.

ENJOY LIFE . . . at the WORTH HOTEL. Right on the Broadway of America . . . West Seventh at Taylor. Near all theatres and down-town shopping.

JACK FERRELL, Manager

TEXAS GULF COAST

FIRST REPORTS

Austin County—Mayo & Micheaux's Bollman 1, Thos. Hill League, ab 48, 3½ mi ne New Ulm, lcn 4200-ft test.

Chambers County—Humble's State-Galveston Bay 1-B, tract 45, 3 mi sw Seabrook, 4 mi w discovery Red Fish Reef, 9500-ft test, dr 1473 ft.

Montgomery County—Allen Dr. Co.'s Hines 1, Section 10, T&NO Survey, 11 mi se Conroe, lcn 2500-ft test.

Tyler County — Franklin, Tidemann & Weby's Thomas & Schlicher Co. 1, Colmesneil prospect, J. C. Boyett sur, 5½ mi nw Colmesneil, moving in prtble rig for 4800-ft test.

COMPLETIONS

Chambers County—Humble's State-Galveston Bay 1-A-247, Red Fish Reef, 11 mi se Cedar Point, flowed 25 bbls distillate, 40,000 ft gas daily, ⅛-in choke, perf 8812-16 ft, tub pres 2900 lbs, new field.

Harris County—J. Newton Rayzor's Robertson 1, R. Morris sur, Red Bluff prospect, 3 mi north Seabrook, elec log 8012 ft, abnd.

SOUTH TEXAS

FIRST REPORTS

Bastrop County—C. R. Franklin's McDonald 2, 100-ac lse, Martha Baker sur, 3 mi ne Cedar Creek, lcn, McDonald 3, 100-ac lse, Martha Baker sur, 300 ft w No. 2, 3 mi ne Cedar Creek, lcn.

Calhoun County—Henshaw Bros.' McKamey 1, 100-ac tr, Thatcher and Leonard sur, 10 mi w Port Lavaca, lcn.

Duval County—E. C. Hubble Dr. Co.'s Farias 1, 273.5-ac lse, Knight Bros. sur 132, 13 mi se Freer, 1½ mi se Tarancahuas fld, lcn, Magnolia's Lopez 2, 960-ac tr, GB and CNG RR Co. sur 6, 2334 ft nw No. 1, sec 455, 2½ mi n Cole fld, 7 mi ne Bruni, ru.

Live Oak County—Adams & Lyles' Alamo Lumber Co. 1, lot 231, blk 15, Live Oak-Bee subd 4, 742.1-ac tr, 9 mi ne Fant City, mo.

Milam County—H. W. McGuire's Brockonbuch 1, 209-ac lse, A. Sapp sur, 3 mi nw Rockdale, lcn.

Nueces County—H. H. Howell's Schultz 1, sec 2, Ross Peters subd 1, Andres F. de la Fuente gr, blk 6, 1027.6-ac lse, 1 mi e Agua Dulce fld, lcn.

Travis County—J. C. Tittle's Attal 1, 50 ac, O. Buchman sur, 15 mi e Austin, lcn.

Webb County—Harold K. Boysen's Watkins 7, sec 10, San Casimiro gr, 20 mi nw Freer, dr 625 ft.

COMPLETIONS

Caldwell County—Weigand Bros.' Hill 1, 137-ac tr, John D. Rains sur, 1500-ac blk, 1½ mi ne and on trend with Salt Flats fld, Austin Chalk 2340-47 ft, td 2703 ft, comp flwd 216 bbls daily, ¼-in ch from brkn Austin Chalk and Buda.

Duval County—M. L. Massingill and P. L. Keller's Peters 1, sur 162, 2 mi w Rancho Solo fld, 24 mi nw Benavides, Sun farmout, Mirando 2608 ft, abnd 2840 ft. Prescott Williams' Taylor 1, blk 84, C. W. Taylor et al subd of 3664-ac tr, Trinidad Vela "El Mesquite" gr, 6 mi nw Hebbronville and in sw part of county, abnd 3567 ft.

Jim Hogg County—Humble's Mestina O. & G. Co. 4, Diego Hinojosa gr, 7 mi e Hebbronville, abnd 6025 ft.

Jim Wells County—O. W. Killam's Wade 10, lot 6, blk 10, W. H. Bode subd "C" Wm. Hobbs sur ab 214, 2640 ft se Wade 9, abnd 5505 ft. H. R. Smith, Inc.'s Thiel 1, blk 25, Gulf Coast Farming and Trucking subd, George Reynolds sur ab 394, 100-ac tr, 3 mi sw Wade City fld, 1 mi sw Orange Grove townsite, td 4945 ft, comp, flwd 20 bbls daily, ⅛-in ch, perf 4920-26 and 4930-37 ft.

Live Oak County—Continental's Cartwright 1, Sandman sur, Houston Oil Co. 1100-ac farmout, abnd 7835 ft.

Medina County—Burt C. Calvin's Chandler 1, 802.3-ac tr, J. Huff sur 12, 11 mi w Devine, 5½ mi s Adams fld, sd 1054-62 ft, tested sw, abnd 1062 ft.

San Patricio County—H. H. Coffield et al's Groos 1, 791-ac tr, Live Oak County School Land sur ab 363, 4 mi n Mathis and on Live Oak County line, abnd 4880 ft, Norsworthy Prod. Co.'s McKamey 1, Farm Tr. No. 1, blk E, Gregory Farm Tr. subd, sur 11, 3 mi ne Midway fld. Stanolind farmout, abnd 6503 ft.

Starr County—Complete Oil Well Ser. Inc.'s Yzaguirre 1, sec 227, 22 mi n Sullivan City, 1⅛ mi e Rincon fld, td 5258 ft, flwd 68 bbls daily ⅛-in ch, perf 4612-18 ft with 20 shots, 48-gravity, considerable gas, discovery of Yzaguirre field. R. C. Hillman's Gonzales 1, sh 232, por 69, Juris of Meier, temp abnd 3937 ft.

Webb County—Glenda Oil Co.'s Saldivar 2-A, 41.64-ac lse, blk 5, E. Garner subd, sur 656, 25 mi e Laredo, abnd 1042 ft. Hiram E. Hall's Slator 1, blk 89, Mission Oil Co. subd, Slator pasture, Borrego gr, 10 mi s Aguilares, temp abnd 1460½ ft. O. W. Killam's Bruni 1, lot 4, Brown O. & G. subd, Los Albercas gr, 8 mi s Bruni, abnd 2863 ft.

Zapata County—Dulup Oil Co.'s Garza 1, blk 53, C. A. Douglas subd, Zorro ranch, Los Comitas gr, 9 mi s Escobas, abnd 1941 ft.

FOR SALE—Rotary Rig, engine and equipment. 1700 ft. of 4" drill stem and other pipe. Stacked rear Grenada Hotel, Grenada, Miss. Inspect and make offer.

J. MARTIN, JR.
Union Planters Nat'l Bank Bldg.
Memphis, Tenn.

NORTH TEXAS

FIRST REPORTS

Archer County—Shell's Coleman 1, lot 3, sec 74, ATNCL sur, lcn 5500-ft test.

Cooke County—Eberhart & McClure's Becker 1, nec lot 10, Geo. Ivy sur A-516, 1¾ mi nw Muenster, lcn. Texas Co.'s Cooke 1, S. McKneely sur A-636, dr 710 ft.

COMPLETIONS

Baylor County—H. D. Egger et al's Portwood 1, swc e½ sw TE&L sec 3138, abnd 1462 ft.

Clay County—Akin-Dimock & Costley's Edrington 1-C, C. H. Stearne sur A-872, abnd 1247 ft. Mundt & Keenan's Hansard 1, sec 8, Thornberry subd, abnd 409 ft.

Jack County—Continental's Robertson 1, M. J. Swan sur A-1650, Palo Pinto lime 970-1122 ft, abnd 3200 feet.

Wichita County—C. A. Reid et al's Jenne 1, w½ lot 2, H. Hastie sur A-98, abnd 605 ft.

WEST CENTRAL TEXAS

FIRST REPORTS

Brown County—Frank Britton et al's Enloe 1, John Williams sur, sec 33, lcn Ordovician test.

Jones County—Charter O&G Co.'s Nobles 1, nw 87½-ac tr, B. Trevino sur, sec 190, A-350, lcn.

WEST TEXAS

FIRST REPORTS

Scurry County — Humble's Land 1, cse se H&TC sec 247, blk 97, dr 500 ft.

Taylor County—B. A. Duffy et al's Sayles 1, nw J. McKnight sur, lcn 4000-ft test.

EAST TEXAS

FIRST REPORTS

Bowie County—J. L. Timberlake et al's Smith 1, T. H. Hill sur, mile s New Boston, rig.

Navarro County—C. F. Carter et al's Birdwell 1, M. Shire sur, ½ mi n Argus, sp. A. J. Willis et al's Swanson 1, S. Johnson sur, core machine.

Van Zandt County—A. D. Clark Fain et al's Hallman 1, R. T. Wheeler sur, 4 mi sw Van, rig.

COMPLETIONS

Morris County—C. B. Zuber et al's Connor 1, Noah Smithwick sur, 5½ mi sw Daingerfield, Pecan chalk 2525-3166 ft, base Austin chalk 3932 ft, Blossom sand 3587 ft, Woodbine 4153 ft, red beds 4290-4370 ft, abnd 4562 ft.

Rusk County—J. S. Harrold et al's Armstrong 1, nwc 73½-ac tr, M. del Carmel sur, 3 mi se Henderson, elev 483 ft, Georgetown lime 3362 ft, Paluxy 4412 ft, first anhydrite 5902 ft, massive anhydrite 6128-6362 ft, Rodessa 6454 ft, Pettit 7172 ft, Travis Peak 7397 ft, abnd 7506 ft.

WYOMING

FIRST REPORTS

Uinta County—McCurdy-Morgan's Government 1, se sw sw 32-19n-118w, Cumberland Flats area, sp.

Washakie County—J. E. Longnecker's Government 1, sw ne 24-47n-90w, Sherard Dome st, dr 57 ft.

COMPLETIONS

Carbon County—Albert Dome Syndicate's Boeke 1, sw nw 18-25n-79w, Albert Dome st, abnd Granite 1600 ft.

Fremont County—Logue Trust's Wisner 1, ne sw 8-33n-98w, Government Draw st, abnd 950 ft.

Ask Angleton Field Be Exempt from Shutdowns

Glenn McCarthy has requested the Texas Railroad Commission to exempt the Angleton field, Brazoria County, from future shutdowns. At a hearing before the commission last week, McCarthy said that tests had indicated the wells produced more efficiently at continuous rates of flow.

McCarthy complained that restrictions on one of his wells in the Hardin field, Liberty County, resulted in premature abandonment and a loss of $25,000.

W. W. Heath, attorney for McCarthy, said that the demand for oil from Angleton has been steady since the field was brought in. The current allowable is 959 barrels daily.

William M. Barret, Inc.
Consulting Geophysicists
Specializing in Magnetic Surveys
Contracts accepted for domestic and foreign projects, using the most improved instrumental and interpretative technique.
GIDDENS-LANE BUILDING
SHREVEPORT, LOUISIANA

THE FORT WORTH LABORATORIES
Analysis of oil field brines, cores, gas, oil, and minerals. Field gas testing. R. H. Fash, Vice-President; Long Distance 138. 828½ Monroe Street, Fort Worth, Texas.

HOUSTON LABORATORIES
Analytical and Consulting Chemist
Podbielniak Gas Analysis
Oil Field Brines, Waters and Cores
Complete Evaluation of Crude Oils
Long Distance 267, Box 132, Houston, Texas

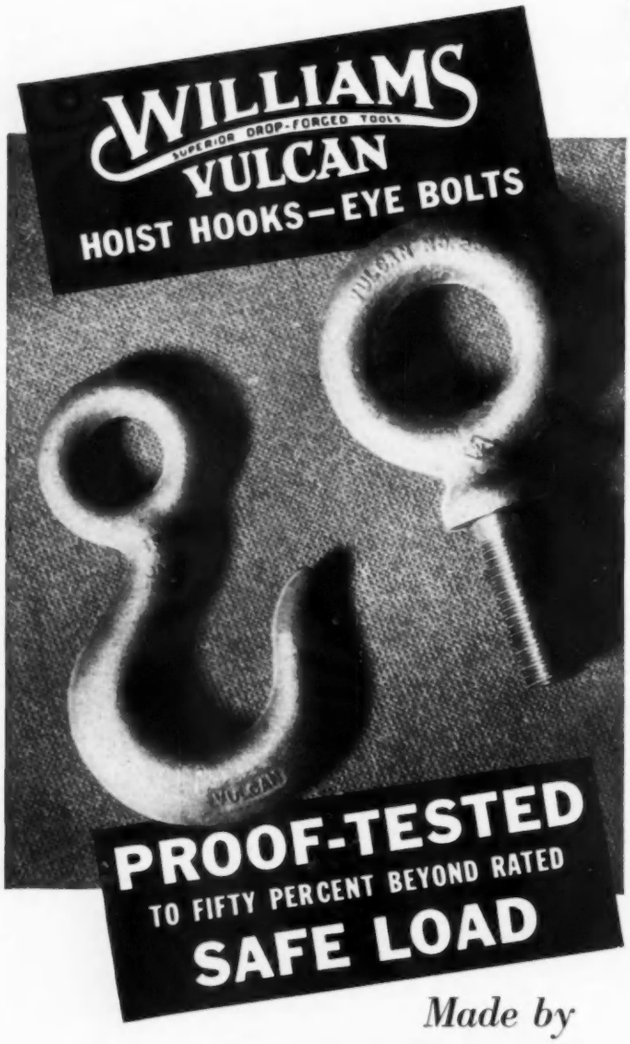
PATENTS
Patents, Trade Marks, Copyrights and Infringement Litigation
HARDWAY & CATHEY
428-29-30 Bankers Mortgage Bldg.
Phone Capitol 9756 Houston, Texas

The Firm of
JACK A. SCHLEY
ATTORNEYS AT LAW
PATENTS - INFRINGEMENTS - OPINIONS
1801-3 Commerce Bldg. — Houston
1807-11 Tower Petroleum Bldg. — Dallas
San Antonio — Washington, D. C.

Shilstone Testing Laboratory, Inc.
Chemical Analyses
Oil, Water, Gas, Etc.
Boiler Water Treatment
Physical Test & Inspection
Houston San Antonio New Orleans
30 Years Experience

HOARD EXPLORATION CO.
Seismic Surveys
Estimates Promptly Furnished
618 Esperson Building
HOUSTON, TEXAS

IDEAL SOUTHERN CALIFORNIA HEADQUARTERS FOR OIL MEN
★
HILTON HOTEL
(ON THE OCEAN FRONT)
LONG BEACH, CALIFORNIA
Rates: $2.50 up
Entertain your clients in the Hilton's Sky Room Terrace. Dining and Dancing. No cover or minimum charge.



Made by

The Makers of **"VULCAN"** *Tongs*

All Williams' "Vulcan" Hoist Hooks and Eye Bolts are heat-treated after forging. Every individual Hook and Eye Bolt is then *proof-tested to 50% beyond its rated* "safe working load." For safety sake, insist that you get this extra assurance of strength and dependability.

"Vulcan" Hoist Hooks are furnished in Shank and Eye patterns—1/2 to 25 tons capacity. Identify them by the orange tip.

"Vulcan" Eye Bolts are supplied in Plain and Shoulder patterns, shanks blank or threaded, in a complete range of sizes—1/5 to 16 tons capacity. Write for complete Williams' catalog, or see our advertisement in the Composite Catalog. Buy from your supply store.

J. H. WILLIAMS & CO., 225 Lafayette St., NEW YORK

NORTH! SOUTH! EAST! WEST!

"The Entirely Different Boiler and Engine Treatment"

The same Sand-Banum is keeping scale and corrosion out of boilers and engines for operators in every section of the country.

They have found it most advantageous to adopt Sand-Banum for regular use. That is why we know you, too, will find Sand-Banum of great value.

Let us tell you about this simple, safe and efficient treatment. There is no obligation—**write today.**

AMERICAN SAND-BANUM CO., Inc.
9 Rockefeller Plaza — New York City
WESTERN SAND-BANUM CO.
Houston, Texas — Fresno, Calif.
Export Representative, PETROLEUM MACHINERY CORP.
30 Rockefeller Plaza — New York City

A Source Book in Geology

By KIRTLEY F. MATHER, Professor of Geology, Harvard University, and SHIRLEY L. MASON, Geologist. 702 pages, illustrated $5.00

This new book gives a comprehensive view of the development of geological science during the last four centuries, by presenting the significant passages from writings of the great contributors to that science in the past.

The excerpts include portions of the work of 130 geologists, original statements of many important principles and theories thus being made available. Many of the excerpts are translated from Latin, French, German or Italian.

Send Orders to the

GULF PUBLISHING CO.

P. O. BOX 2011 HOUSTON, TEXAS

NOTES FOR THE Equipment Buyer and User

Screen Cleaner

K-T SCREEN SERVICE

A new well screen cleaner to hydraulically wash perforations or screen with alternations of flow as high as 180 per hour has been announced by K-T Screen Service, 721 Bankers & Mortgage Building, Houston.

The washer consists of a locking or hold-down device, a packer of neoprene, a polished plunger-rod section with a 15-foot working surface, and a closed cylinder working over the plunger and providing the suction effect necessary to provide flow during the up-stroke. On the down-stroke, the cylinder, moving over the plunger, expels the fluid previously drawn into it, forcing it around and through the screen and drawing it in again on the next up-stroke.

When run into a well, the locking device is held inoperative until bottom is reached, at which time the cleaner is lifted slightly, and again set down, locking the slips tightly against upward displacement. To wash, the cylinder section is alternately raised and lowered within the 15-foot stroke section of the plunger. To raise the equipment, it is necessary only to exceed the 15-foot upward travel, at which time the slips will again be set as soon as lifting is stopped and lowering begun. By this means an entire screen can be cleaned in sections which can be effectively covered by the hydraulic action set up by the washer.

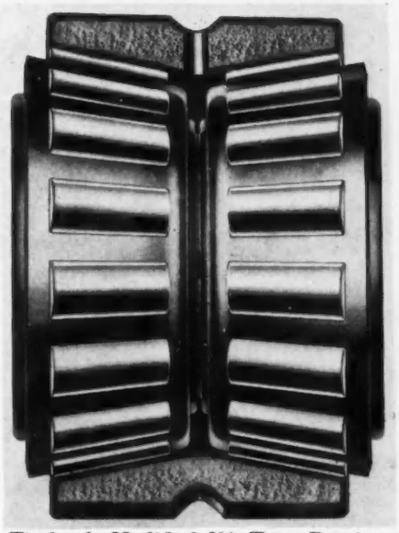
The washer may be used either with acids or with chemicals, either being dumped in the hole before running the washer, and the fluid then circulated as would be any other already present around the screen.

By-pass apertures, uncovered by the cylinder at the upper limit of its stroke, permit the washer to be unloaded, and thus prevent swabbing action when being withdrawn from the hole.

Any sand, scale or other debris loosened by the washing is not picked up by the washer, but falls through the annular space between washer and screen pipe, there to be picked up by bailer after the washing has been completed.

The washer is 50 feet long when assembled for operation, but may be broken into sections for transportation, with the maximum length slightly over the 15-foot clear or working section of the polished plunger.

The washer is designed to circulate as high as 450 gallons per hour through the perforations or screen pipe, assuring ample flow for dislodging any stoppage which may exist.



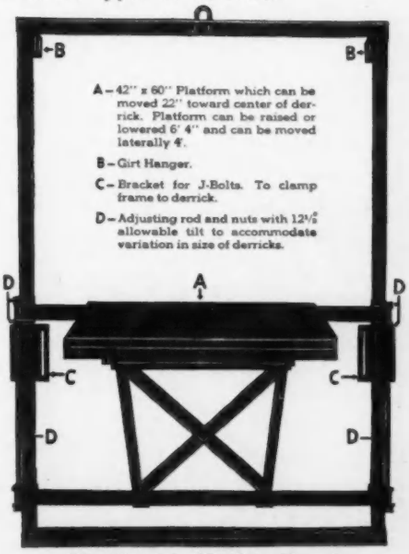
Timken's Modified NA Type Bearing

Monkey Board

MacCLATCHIE MANUFACTURING COMPANY

An adjustable monkey board with rack, designed for installation within 10 minutes and for removal from location to location without dismantling, has been announced by MacClatchie Manufacturing Company, Compton, California.

The working platform, adjustable in three directions, may be moved 22 inches toward the center of the derrick, raised or lowered 6 feet, 4 inches, or moved laterally 4 feet. The frame is adjustable to any tilt desired for different types of derricks.


B
B
A – 42" x 60" Platform which can be moved 22" toward center of derrick. Platform can be raised or lowered 6' 4" and can be moved laterally 4'.
B – Girt Hanger.
C – Bracket for J-Bolts. To clamp frame to derrick.
D – Adjusting rod and nuts with 12½° allowable tilt to accommodate variation in size of derricks.
D
A
D
C
C
D
D

MacClatchie Monkey Board

Roller Bearing

THE TIMKEN ROLLER BEARING COMPANY

A new bearing made up of a double-row outer race or cup and two single-row inner races or cones has been announced by The Timken Roller Bearing Company, Canton, Ohio. It is a modification in the design of the standard NA type, or non-adjustable roller bearing, and is designed to serve as a sheave bearing.

Races and rolls are ground to establish precision limits so that when the cones are assembled into the cup, the front faces of the cones contact and the proper running clearance is provided. Front cone faces are slotted and chamfered to provide an entrance for lubricant to within the bearings.

Chamfered front faces eliminate the necessity of machining a deep annular groove around the shaft to carry the lubricant to the various points of entrance in the bearing. An annular groove and holes are provided in the cup where lubricant may be introduced through a fitting in the sheave hub.

The problem of sealing the bearing chamber has been simplified by extending the length of the large cone rib and creating a surface concentric with the shaft and sheave bore on which a seal may be run. The seals have the same outside diameter as the cup, and are pressed into the sheave bore, holding the bearing together during assembly. The backface of the cones protrude slightly outside the seal to establish clearance between the sheaves and the frames of the block.

The bearings are designed to a minimum width and with an inside diameter large in relation to outside diameter, and also with a maximum radial and thrust capacity for the space occupied. Being an anti-friction thrust bearing as well as an anti-friction radial bearing, sheaves may rotate freely without axial float.

Bethlehem Supply Company Two New Texas Stores

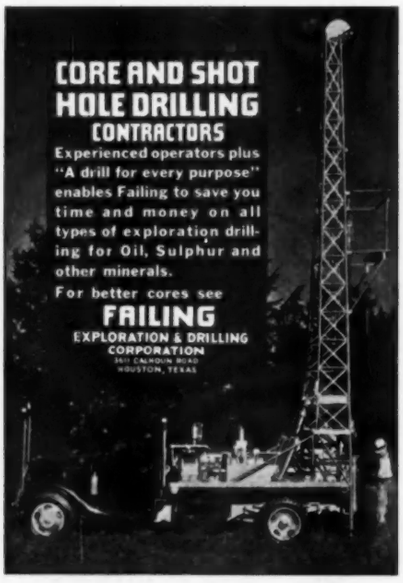
Bethlehem Supply Company, Tulsa, has announced establishment of stores at LaWard, Texas, under the direct supervision of R. A. Brown, district manager with headquarters at Corpus Christi, and at Seminole, Texas, under the supervision of R. E. Throckmorton, district manager at Midland.

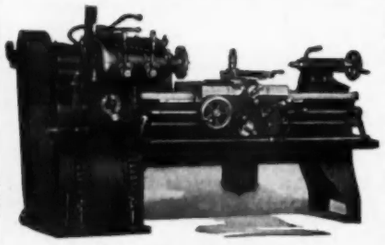
J. M. Woods is store manager at LaWard, and is assisted by J. L. Morgan, assistant store manager; J. P. Branch, field salesman, and John A. Rich, floorman.

J. W. Stewart, store manager at Seminole, is assisted by Virgil Moon, assistant store manager, and W. M. Vandivert, field salesman.

Pittsburgh Equitable and Merco Nordstrom Launch Service Trucks

Pittsburgh Equitable Meter Company and its subsidiary, Merco Nordstrom Valve Company, have placed completely equipped field service trucks in op-


CORE AND SHOT
HOLE DRILLING
CONTRACTORS
Experienced operators plus "A drill for every purpose" enables Failing to save you time and money on all types of exploration drilling for Oil, Sulphur and other minerals.
For better cores see
FAILING
EXPLORATION & DRILLING CORPORATION
HOUSTON, TEXAS



The Boye & Emmes Timken Bearing Engine Lathe

COMPLETE LINES

Machine Tools—Metal Working Machinery—Bolt and Pipe Threading Machines—Electric Arc Spot and Butt Welders—Hand Power and Electric Traveling Cranes—Foundry and Forge Shop Equipment.

C. J. HARTER, Machinery

4000 Clay, Houston, Texas
Fairfax 1466

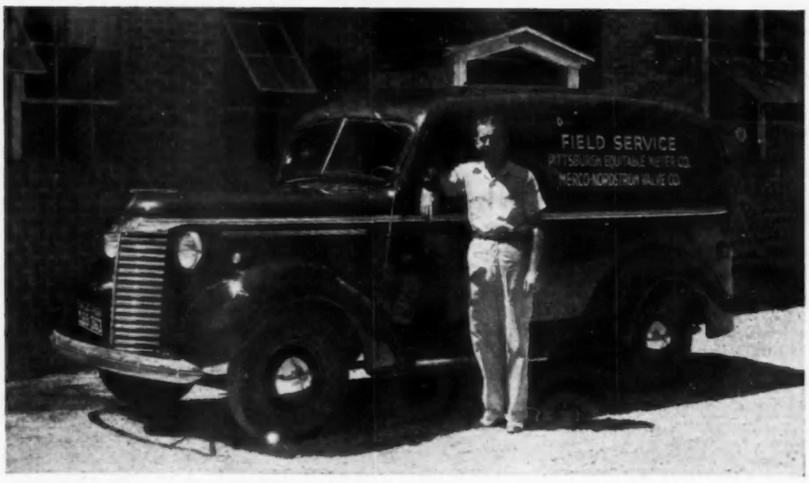
MOTT-SMITH CORPORATION

GRAVIMETER SURVEYS AND EQUIPMENT

● More months of operations—all over the world—than the combined total of all other exploration companies.

SHELL BLDG. HOUSTON, TEXAS

NOTES FOR THE Equipment Buyer and User



Wayne Renfro, service engineer for Pittsburgh Equitable Meter Company and Merco Nordstrom Valve Company, pictured with the company's Tulsa area service truck.

eration from their Tulsa and Chicago offices.

The trucks are fitted with necessary tools, lubricants and test apparatus to properly handle field maintenance of products of the companies. Similar units are to be placed in service in other areas, according to A. E. Higgins, sales manager.

Wayne Renfro, service engineer, is in charge of the truck operating out of the Tulsa office.

Greenfield Tap & Die Names H. M. Hubbard President

Howard M. Hubbard, former secretary-treasurer and director of Harris-Seybold-Potter Company, Cleveland, has been named president of Greenfield Tap & Die Corporation, Greenfield, Massachusetts.

Hubbard succeeds Donald G. Millar, who was elevated to the board chairmanship to replace Frederick H. Payne, who resigned to devote his entire time to national defense work as chief of the Hartford ordnance district.

Francis A. Smith, who has been associated with the company for the past 20 years, the last few as vice president and general manager, has resigned.

Hewitt Rubber Offers Rotary Hose in Short Lengths

Rotary hose in 25- to 30-foot lengths, two of which make up the normal-length for drilling operations, is being offered by Hewitt Rubber Corporation, Buffalo, New York.

The new length is intended to halve rotary hose replacement cost when failure is caused by accidental injuries or abuse.

Couplings used with the hose are built into the hose wall, reinforced with multiple layers of high-tensile spring steel wire clamped and bolted with steel bands. The inner surface of the coupling is rubber covered, the regular inner tube of the hose extending through the coupling shank and over the face. There is no metal exposed to wear, and the inside diameter is the same as the rest of the hose, full-sized with no flow-retarding obstructions.

Standco
NO-SMOKE
STANDCO BRAKE LINING
Stands the gaff and gets the job done without scoring brake rims. See page 2100 Composite Catalog.
Standco Brake Lining Co.
HOUSTON

TIN END ENVELOPES
for Sand Samples
Made of strong kraft paper, tightly sealed to eliminate leaks. Top end folds over with easy twist and holds contents securely. Most economical for sending and filing of sand samples. Phone, write or wire for our low prices.
GULF ENVELOPE CO.
617 BROOKS Fx. 4171
HOUSTON, TEXAS

NOTES FOR THE Equipment Buyer and User

Dowell Incorporated Advances Stanley Morian and Jack Sutherlin

Stanley C. Morian, district engineer at Houston for Dowell Incorporated, has been named sales engineer. He will make his headquarters in the Commerce Building, Houston.

S. C. Morian

Jack Sutherlin, station manager at Great Bend, Kansas, has been promoted to a research engineering post with headquarters at the Tulsa general office.

Reagin E. Dublin has been transferred from Hays, Kansas, to Great Bend to take over Sutherlin's former duties, while Jack Sampson, former treating engineer at Great Bend, has been made station manager at Hays.

A 1934 graduate in petroleum engineering of the University of Oklahoma, Morian joined Gulf Oil Corporation, serving in various capacities from field clerk to production engineer at Hobbs, New Mexico. He joined Dowell Incorporated in West Texas in April, 1937, and for the past two years has been located in the Gulf Coast area on special assignment of studying chemical service problems.

J. Sutherlin

Sutherlin majored in geology at A. & M. College of Texas, and was first employed by Cabot Company in the technical department. He has been with Dowell Incorporated for the past five years, stationed in Western Kansas with the exception of periodic training periods in other areas.

Bauer Named General Sales Head for Witte Engine Works

The appointment of Frank K. Bauer as general sales manager and secretary of Witte Engine Works, Kansas City, Missouri, was announced last week by Ed H. Witte, company president.

F. A. Bauer

Bauer served with National Battery Company for the past 17 years, starting as cub salesman in Kansas City. He was named district sales manager in 1927, Kansas City Division sales manager in 1933, and general sales manager at the St. Paul general office in 1937.

Bill Disch Joins Dowell at Grayville, Illinois

Bill Disch, former Western Kansas district manager for Reed Roller Bit Company, is now associated with Dowell Incorporated in the cementing division. He will be stationed at Grayville, Illinois.

Bill Disch

Disch had been connected with Humble Oil & Refining Company and Standard Oil Company of Venezuela, joining Reed Roller Bit Company in 1936.

O'Donnell Dead

Martin O'Donnell, 48, manager of purchases and merchandise for Oil Well Supply Company, died at Dallas, August 20, following an operation. He was born in Ireland, and after graduating from college served in the British army during the World War. He later taught school in England, and in 1920 came to America where he joined Wilson-Snyder Manufacturing Corporation. He was brought into Oil Well Supply Company's organization when Wilson-Snyder Manufacturing Corporation became a subsidiary in 1929.

Well Cleaning Service Offered in Texas Fields

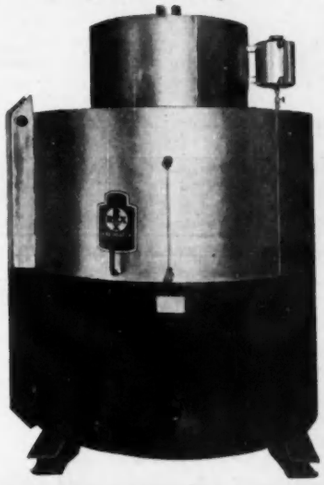
Gas Torpedo Well Cleaning Company, Box 1531, Alice, Texas, has announced a well cleaning service employing the Gay-Thornton process, being offered to operators in Southwest, Central, North, West and Panhandle districts of Texas.

The process consists of compressing compounded gases into a cylindrical container of sufficient length to properly treat the liner, perforations or formation. The container has a series of deeply milled grooves running from

REX PRE-HEATER

Turns Exhaust Steam Into Cash!

Operates on exhaust steam from drilling engine and boiler feed pumps . . . saves fuel and increases efficiency of boilers. For complete details see Pages 2146-2147 of your Composite Catalog.



THE REX COMPANY
P. O. BOX 2431 HOUSTON, TEXAS
Mid-Continent Distributor:
The Continental Supply Co.
California Distributor: The Howard Supply Co.

REGISTERED PROFESSIONAL ENGINEERS
Air • Gas • Water
REPRESSURING
RECYCLING • PRESSURE MAINTENANCE
INSTALLATION • OPERATION
PETROLEUM ENGINEER
JO H CABLE
WICHITA FALLS TEXAS
GAS MEASUREMENT • PERMEABILITY
COMPRESSOR PLANTS • POROSITY
BOTTOM HOLE PRESSURE • SATURATION
GAS OIL RATIOS • RECOVERABLE OIL
CONTROL OF FLOW THRU FORMATION
REGISTERED PROFESSIONAL ENGINEERS

3-Point PROTECTION
AGAINST DAMAGED THREADS

The next time you order pipe, be sure the threads are properly protected while in transit . . . specify X-L "All-Thred" Thread Protectors. Leading operators everywhere prefer them because of their scientific construction . . . Write factory at Wheeling for your complete FREE Catalog.

Warehoused by
HENRY H. PARIS, 1121 Rothwell St., Houston
JAMES RIORDEN CO.—Los Angeles, San Francisco

WHEELING MACHINE PRODUCTS COMPANY
WHEELING WEST VIRGINIA

NOTES FOR THE Equipment Buyer and User

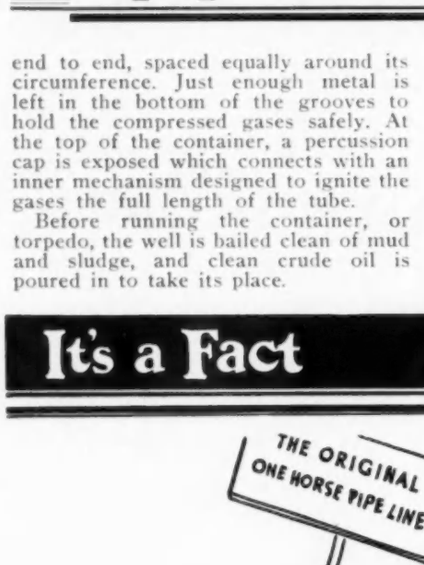
end to end, spaced equally around its circumference. Just enough metal is left in the bottom of the grooves to hold the compressed gases safely. At the top of the container, a percussion cap is exposed which connects with an inner mechanism designed to ignite the gases the full length of the tube.

Before running the container, or torpedo, the well is bailed clean of mud and sludge, and clean crude oil is poured in to take its place.

The container is run in on the regular tubing or drill pipe until opposite the point to be cleaned. When in place, a go-devil is dropped inside the tubing from the derrick floor, striking the percussion cap and igniting the gases.

Representatives of the company include S. E. Gilbert, formerly with Oilfield Machine & Supply Company, Houston, and L. E. Trout and Robert P. Cooper, of the geological firm of Trout & Cooper, Alice, Texas.

It's a Fact — Johnston



IN 1810, AN OIL CREEK, PENNSYLVANIA, SETTLER WHO HAD MORE ENTERPRISE THAN HIS NEIGHBORS, WOULD SKIM TWO 5-GALLON KEGS FULL OF OIL FROM THE CREEK, LOAD THEM ON A HORSE AND WALK THE 80 MILES INTO PITTSBURGH. THERE HE WOULD SELL THE OIL AND BUY FOOD AND CLOTHING FOR HIS FAMILY. ONLY ONE RISK OFTEN MARRED THE TRIP...IF AS LITTLE AS TWO BARRELS OF OIL WERE BROUGHT IN BY SOMEONE ELSE AT THE SAME TIME, THE PITTSBURGH OIL MARKET WOULD BE FLOODED—MAKING HIS TEN GALLONS OF OIL PRACTICALLY WORTHLESS!

TODAY THE BIG RISK IS IN PASSING UP PRODUCTIVE SANDS WITHOUT KNOWING ABOUT THEM. THAT'S WHY SO MANY OPERATORS USE THE JOHNSTON FORMATION TESTER TO TEST IN ADVANCE THE PRODUCTION POSSIBILITIES OF THEIR OIL SANDS. FOR THE JOHNSTON TESTER QUICKLY, ACCURATELY AND SAFELY SHOWS WHICH OF THOSE SANDS ARE WET, WHICH ARE DRY, AND WHICH WILL PRODUCE OIL OR GAS. IT ENABLES OPERATORS TO DRILL AHEAD EFFICIENTLY AND ECONOMICALLY, KNOWING BEFORE CASING IS SET WHICH ZONES ENCOUNTERED WILL BE THE MOST PROFITABLE TO PRODUCE.

THE JOHNSTON ENGINEERING BULLETIN 38 IS ESPECIALLY WRITTEN AND ILLUSTRATED TO EXPLAIN ALL THE IMPORTANT FACTS ABOUT JOHNSTON TESTING METHODS AND EQUIPMENT. WRITE FOR IT TODAY... THERE'S NO OBLIGATION.

Johnston

FIVE DOLLARS ($5.00) WILL BE PAID FOR EACH INTERESTING OR UNUSUAL FACT CONCERNING THE PETROLEUM INDUSTRY (EITHER IN THE UNITED STATES OR ABROAD) WHICH IS USED IN THIS SERIES OF JOHNSTON ADVERTISEMENTS. SUBSTANTIAL PROOF MUST ACCOMPANY EACH CONTRIBUTION. WHEN TWO OR MORE SIMILAR FACTS ARE SENT IN, THE AWARD WILL BE GIVEN TO THE FIRST ONE RECEIVED...

M. O. JOHNSTON Oil Field Service Corp.
3117 SAN FERNANDO ROAD ALbany 0186
LOS ANGELES, CALIFORNIA
Bakersfield 2794 Ventura 5621
"Servicing California and Selling Exclusively Foreign"

FORMATION AND CASING TESTING — JOHNSTON

JOHNSTON Oil Field Service Corp.
5702 NAVIGATION BLVD.
HOUSTON, TEXAS
"Servicing Mid-Continent and Gulf Coast"

"WHY SET CASING BEFORE YOU KNOW!"

C. H. Seger, Jr., Manager at Houston for Bethlehem Supply

Appointment of C. H. Seger, Jr., as division sales manager at Houston for Bethlehem Supply Company, Tulsa, was announced last week by G. A. Thompson, vice president. Seger will work under C. C. Crider, southern division manager.

C. H. Seger

A graduate of the University of Illinois, Seger formerly was connected with the National Bank of Tulsa. He became associated with Bethlehem Supply Company as credit manager, serving in that capacity up to the present.

Hauenstein and Curtis Address California Nomads Club

Charles Hauenstein, of Iraq Petroleum, discussed present conditions and operating methods in the Near East before the California Nomads Club August 14.

C. H. Curtis, who recently returned from Argentina where he had been doing geological work for the Y. P. F. in Patagonia, spoke on relations with Latin American countries and described work done in unproven areas south and west of Camodoro Rivadavia. He supplemented his discussion with motion pictures.

Guests included John Domeroq, California Arabian Standard; H. G. Baker, Bahrein Petroleum; H. C. Creath and R. W. Perry, of Ultramar, Argentina; C. K. Banton, British Burmah; A. V. Sardania, C.N.P., Brazil; James Schaffer, Tex.-Cal. Petroleum, Colombia; M. H. Bush, Bahrein Petroleum, and M. J. Bonzerio, Y.P.F., Argentina.

Supply Personals

R. Volbrecht, of the motor control sales division of the Philadelphia district office of Cutler-Hammer, Inc., has joined the company's New York merchandising sales staff.

Jack Towery, with Pelican Well Tool & Supply Company for the past five years, has joined Broderick & Bascom Rope Company, St. Louis, as sales representative in the territory comprising Louisiana, Arkansas, East Texas and Mississippi. He is making his headquarters at Houma, Louisiana.

J. B. Fisher, vice president and chief engineer of Waukesha Motor Company, Waukesha, Wisconsin, has been appointed chairman of an advisory committee on engines to study means of further standardizing and interchanging unit assemblies, parts and accessories within and between five military standard trucks adopted by the army general staff. The committee was set up by the Society of Automotive Engineers under the sponsorship of the assistant secretary of war.

Squeaks from the Bull Wheel

Wrong Diet

An old negro was in the hospital and one of the nurses put a thermometer in his mouth to take his temperature. Presently, when the doctor made his rounds, he said:

"Well, Mose, have you had any nourishment?"

"A lady done gimme a piece of glass to suck on, boss, but I'se still pow-ful hungry."

Crafty

"And you get an extra pair of trousers with this suit."

"Throw in an extra coat and I'll take it"

Heave to, Matey

A couple of sailors had hired an auto to see a strange city. At one corner they were stopped by a cop for going against traffic on a one way street.

"Not that way, either," the cop barked as they started to round a corner. "No left turns here!"

"What'll we do?" one of the bewildered gobs asked the other.

"Gotta save our honor," responded the other. "Scuttle her!"

Preshrunk

"Do you guarantee this suit not to shrink?"

"Absolutely. Vy, every fire company in town has squirted water on that suit."

Low

"Well, son, how are your marks?"

"They're under water."

"What do you mean, 'under water'?"

"Below 'C' level."

Going Modern

"You rarely hear of anyone entering business on a shoestring today."

"Of course not. Everything depends on zippers."

Not Far Off

"Billy, give me a sentence using the word 'torture'."

"A heavy knock at the door, he leaped from her embrace, 'I torture husband was out of town'."

A Picnic

When Betty came in from the children's party she had attended her mother said:

"Well, daughter, did you have a nice time?"

"Oh, yes. It was the best party I ever tasted."

Page Wagner

May I have overtime this week, sir?

What for?

I dreamt about my work all last night, sir.

Old Maid's Church

"I understand that at your church you are having such small congregations. Is that so?"

"Yes. So small that every time the rector says 'Dearly Beloved,' you feel as if you had received a proposal."

Just Heels

Who's the gal with the French heels?

She's my sister and those guys ain't French.

Everything in Texas Big Except Well Allowables

Some boys in Kansas City were showing a Texas rancher the city.

"What do you think of our stock yards?" they asked him.

"Oh, they're all right, but we have branding corrals in Texas that are bigger," he said.

That night they put some snapping turtles in his bed. When he had turned back the cover, he asked what they were.

"Missouri bed bugs," they replied.

He peered at them a moment. "So they are," he decided. "Young uns, ain't they?"

Alibi

Don't you know that the bass season isn't open yet? What are you doing with that big one on your string?

Why, you see, Warden, he's been taking my bait all morning so I tied him up until I'm ready to go home.

Experienced Tosser

"How did you get that bump?"

"My wife threw a vase at me."

"Why on earth didn't you duck?"

"I did, but she allowed for it."

Long Distance

"Does the giraffe get a sore throat if he gets wet feet?"

"Yes, but not until the next week."

Hoof-and-Mouth Trouble

"Stop waving your arms and making faces, sir. Why, I haven't even touched your tooth."

"I know you haven't, but you're standing on my corn."

Seating

This is a very large skating rink you have here.

Yes, it has a seating capacity of 10,000.

Time Not Valuable

Young man, I notice that you are almost invariably from 10 to 20 minutes late every morning.

I know, sir, but you seem to set such a small value on my time that I didn't think it mattered much.

Technical

Did you say the man was shot in the woods, doctor?

No, I said he was shot in the lumbar region.

The Trouble

So your married life was very unhappy? What was the trouble? December wedded to May?

Lan' sake, no mum! It was Labor Day wedded to de day of rest!

Won't Come Off

"Sergeant, what's the trouble with this man? Does he ever wash his face?"

"Yes, sir."

"Are you quite sure?"

"Yes, sir, I'm quite sure, but his face dries a bad color."

Dubious Comment

When the office typist left to get married, the staff clubbed together and bought her a vacuum cleaner.

The honor of making the presentation fell upon Smith, who spent much time and thought on his speech.

When the time came, he stepped forward, blushed furiously and said:

"On behalf of my colleagues and myself, I congratulate you, and beg you to accept this token of our regard. We hope that, as you use it to free your home of unnecessary litter, you will be reminded of your old friends at the office."

Gotkool
WATER CANS
& COOLERS
GOTT Water Coolers are the convenient way to keep drinking water handy to the worker, protect it from impurities. Their exclusive construction keeps water cool for long periods. Snug fitting large removable top, handy non-leaking push button faucet. GOTT Water Cans for handy field use. Your Supply Store has them, get one today! . . . .
Gott
GOTT WATER COOLER
Made in 3, 5, 8, 10, and 20 gallon sizes.
GOTT WATER CAN
Made in 1-, 3, 5, and 10 gallon sizes.
H. P. GOTT MFG. CO.
WINFIELD, KANSAS
KEEP PURE DRINKING WATER ALWAYS HANDY

INDEX TO ADVERTISERS

*** Indicates that detailed information on the manufacturer's products or services may be found in the 1940 edition of the Composite Catalog of Oil Field & Pipe Line Equipment.**

A — Page

*Abercrombie Pump Co. — —
*Acme Fishing Tool Co. — —
Acme Gas Lift Co. — —
*Advanced Petroleum Equipment Corp. — —
Air Reduction Sales Co. — —
*Ajax Iron Works — —
*Alten's Foundry & Machine Works — —
*Aluminum Company of America — —
Aluminum Ore Co. — —
American Askania Corp. — —
American Assn. of Petroleum Geologists — —
*American Cable Division of American Chain & Cable Co. — Second Cover
American Cast Iron Pipe Co. — —
*American Hammered Piston Ring Division of Koppers Co. — —
*American Iron & Machine Works Co. — Fourth Cover
*American Meter Co. — —
*American Sand-Banum Co. — 80
*American Steel & Wire Co. — —
Atlas Drop Forge Co. — —
Atlas Supply Co. — —
*Axelson Manufacturing Co. — —

B

*Baash-Ross Tool Co. — 27
*Baker Oil Tools, Inc. — 3
*Baldwin-Duckworth Division of Chain Belt Co. — —
*Barold Sales Division — 31
William M. Barret, Inc. — 79
*The Barrett Co. — 57
*Bartlett-Hayward Division of Koppers Co. — —
*Bethlehem Steel Co. — 35
*Bethlehem Supply Co. — —
*Black, Sivalls & Bryson — —
*Braden Steel Corp. — —
*Bradford Motor Works — —
*The Brewster Co. — —
The Bridgeport Machine Co. — —
*Broderick & Bascom Rope Co. — —
*Brown Oil Tools, Inc. — —
*The Buckeye Traction Ditcher Co. — —
Bucyrus-Erie Co. — 62
*The Buda Co. — —
*Butler Manufacturing Co. — —
A. M. Byers Co. — —
*Byron Jackson Co. — —

C

Jo H. Cable — 83
*Cameron Iron Works — —
*Cardwell Manufacturing Co. — —
Carnegie-Illinois Steel Corp. — —
*J. I. Case Co. — —
*Caterpillar Tractor Co. — —
*The Cavins Co. — —
*Chain Belt Co. — —
*Clark Bros. Co. — —
*Climax Molybdenum Co. — —
*Coffing Hoist Co. — —
Columbian Steel Tank Co. — —
*Continental Motors Corp. — —
Continental Oil Co. — —
The Continental Supply Co. — 7
*Fred E. Cooper Co. — —
*The Cooper-Bessemer Corp. — —
*Core Laboratories, Inc. — —
*Crane Co. — 8
W. H. Curtin Co. — —

D

*Darling Valve & Manufacturing Co. — 58
*Diamond Chain & Manufacturing Co. — —
*Dixon Valve and Coupling Co. — —
*Dowell Incorporated — 10
*The Dragon Manufacturing Co. — —
*E. I. du Pont de Nemours & Co. — 29

E

*Eastman Oil Well Survey Co. — —
Economy Electric Lantern Co. — —
Elastic Stop Nut Corp. — —
*Engineering Laboratories, Inc. — 67

F

Failing Exploration & Drilling Co. — 82
*Geo. E. Failing Supply Co. — —
First National Bank in Houston — —
First National Bank & Trust Co. of Tulsa — —
Fluid Packed Pump Co. — —
Ford Motor Co. — —
The Fort Worth Clearing House Assn. — —
The Fort Worth Laboratories — 79
Fort Worth Steel & Machinery Co. — —
Frick-Reid Supply Corp. — —

G

*Gardner-Denver Co. — —
*The Garlock Packing Co. — —
*Gaso Pump & Burner Manufacturing Co. — —
Gay-Thornton Co. — —

Page

*General Electric Co. — —
General Geophysical Co. — —
General Motors Sales Corp. — —
Geological Scientific Service Co. — Third Cover
Geophysical Service, Inc. — —
*Globe Oil Tools Co. — —
*Goodyear Tire & Rubber Co. — —
*H. P. Gott Manufacturing Co. — 85
*Gray Tool Co. — 53
*Green Head Bit & Supply Co. — —
*The Guiberson Corp. — —
Gulf Envelope Co. — 82
Gulf Oil Corporation — —
Gulf Publishing Co. — 33 and 80

H

*Halliburton Oil Well Cementing Co. — —
Hardway & Cathey — 79
C. J. Harter, Machinery — 82
*Haynes Stellite Co. — —
*Hazard Wire Rope Division of American Chain & Cable Co. — —
Heidie's Machine Works — —
The Hercules Powder Co. — —
*Hewitt Rubber Corp. — 23
Hilton Hotel — 79
Hoard Exploration Co. — 79
*Hobbs Manufacturing Co. — —
Hollywood Plaza Hotel — 77
Houston Laboratories — 79
Houston Pipe Appliances Co. — —
*Hughes Tool Co. — First Cover
Humble Oil & Refining Co. — —
*Hunt Tool Co. — —
Hyatt Bearings Division — —

I

Independent Exploration Co. — —
*Ingersoll-Rand Co. — —
*International Harvester Co. — —
*The International Nickel Co. — 9

J

Jarecki Manufacturing Co. — —
*Jensen Brothers Manufacturing Co. — 64
*Johns-Manville — —
*M. O. Johnston Oil Field Service Corp. — 84
The S. M. Jones Co. — —
*Jones & Laughlin Steel Corp. — —

K

*Kerotest Manufacturing Co. — —
*Keuffel and Esser Co. — —
*Kibele Manufacturing Co. — —
*Kinzbach Tool Co. — —
*Koppers Co. — —

L

Landis Machine Co. — —
*Lane-Wells Co. — —
*Larkin Packer Co. — —
The Thomas Laughlin Co. — 6
*The Layne & Bowler Co. — —
Lebanon Steel Foundry — —
*Le Roi Co. — —
*A. Leschen & Sons Rope Co. — —
*The Lincoln Elertric Co. — —
*Line Scale Co. — —
*Link Belt Co. — —
Lone Star Cement Corp. — —
*Lucey Boiler & Manufacturing Co. — —
*Lucey Export Corporation — —
*The Ludlow Valve Manufacturing Co. — —
*Lufkin Foundry & Machine Co. — —

M

*MacClatchie Manufacturing Co. — —
Macwhyte Co. — 5
P. R. Mallory & Co., Inc. — —
The Marley Co. — —
Marmon-Herrington Co. — —
J. Martin, Jr. — 79
*John N. Martin, Manufacturer — —
McCollum Exploration Co. — —
*McEvoy Co. — —
McKissick Products Corp. — —
*Merco Nordstrom Valve Co. — —
*Merla Tool Corp. — —
*Metric Metal Works — —
*Midco Bailer Co. — —
*Miller Sand Pump Co. — —
*Minneapolis-Moline Power Implements Co. — —
*Mission Manufacturing Co. — 12
*Lee C. Moore & Co. — —
*Morse Chain Co. — —
Mott-Smith Corp. — 82
Mudrite Chemicals, Inc. — —
Murray Rubber Co. — —

N

National Bank of Tulsa — —
*National Lead Co. — 31
The National Supply Co. — 24-25

Page

National Tube Co. — —
Norvell-Wilder Supply Co. — 4
*Novo Engine Co. — —

O

*Oil Center Tool Co. — —
*Oil City Brass Works — —
Oil Well Supply Co. — 51
*Otis Pressure Control, Inc. — —

P

*The Parkersburg Rig & Reel Co. — —
*Patterson-Ballagh Corp. — 75
*Pelican Well Tool & Supply Co. — 70
Petroleum Electric Power Assn. — 42
Petroleum Engineering, Inc. — 41
Petroleum Rectifying Co. of California — 39
*Pittsburgh Equitable Meter Co. — —
*Pittsburgh Steel Co. — 65
Plymouth Cordage Co. — —

R

Reading-Pratt & Cady Division of American Chain & Cable Co. — —
*Rector Well Equipment Co. — —
*Reda Pump Co. — —
*Reed Roller Bit Co. — —
*Regan Forge & Engineering Co. — —
*Joseph Reid Gas Engine Corp. — —
*Republic Steel Corp. — 61
*The Rex Co. — 83
*The Ridge Tool Co. — 75
John A. Roebling's Sons Co. — —

S

Safety Gas Main Stopper Co. — —
Jack A. Schley — 79
*Schlumberger Well Surveying Corp. — —
The Second National Bank of Houston — —
*Security Engineering Co. — —
Seismic Exploration Co. — —
Seismograph Service Corp. — —
Shell Oil Co., Inc. — 63
Shilstone Testing Laboratory, Inc. — 79
*SKF Industries, Inc. — —
A. O. Smith Corp. — 47
*E. M. Smith Co. — 71
*South Chester Tube Co. — —
Southern Engine & Pump Co. — 66
Southern Pacific Lines — 65
Spang Chalfant, Inc. — —
*Spang & Company — —
*Sperry-Sun Well Surveying Co. — —
Standard Supply and Hardware Co. — —
*Standco Brake Lining Co. — 82
*Star Drilling Machine Co. — —
Straus-Bodenheimer Co. — —

T

E. C. Tecktonius Manufacturing Co. — —
*Templeton, Kenly & Co. — —
Texaco Development Corp. — —
The Texas Co. — —
Texas Electric Steel Casting Co. — —
The Thermoid Co. — —
*The Timken Roller Bearing Co. — —
*Tretolite Co. — —
Trinity Portland Cement Co. — —
Tulsa Shock Absorber Co. — —
*Twin Disc Clutch Co. — 69

U

*Union Wire Rope Corp. — —
*Union Carbide & Carbon Corp. — —
*United States Rubber Co. — —
United States Steel Corp. — 51
*Universal Atlas Cement Co. — —

V

*Vickers, Inc. — —

W

Warner & Swasey Co. — —
*Waukesha Motor Co. — —
*Well Machinery & Supply Co. — —
Well Surveys, Inc. — —
Western Electric Co. — —
*Westinghouse Electric & Manufacturing Co. — —
*Wheeling Machine Products Co. — 83
*The Wheland Co. — 37
Wichita Engineering Co. — —
*Wickwire Spencer Steel Co. — —
*J. H. Williams & Co. — 80
*Wilson Manufacturing Co. — —
*Wilson Supply Co. — —
Witte Engine Works — —
Worth Hotel — 78
*Worthington Pump & Machinery Corp. — —
Wyatt Metal & Boiler Works — —

Y

Youngstown Sheet & Tube Co. — —